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PRACTICAL ESSAYS

ON THE MANAGEMENT OF

PREGNANCY AND LABOUR;

AND ON THE

INFLAMMATORY AND FEBRILE DISEASES

OF

LYING-IN WOMEN.

By *JOHN CLARKE, M. D.*

Physician to the General Lying-in Hospital in Store-Street, and to the Asylum
for Female Orphans; and Teacher of Midwifery in London.

ANCEPS HÆREO, QUA MIHI VIA INSISTENDUM EST, UT, ÆGRIS
SUBVENIAM. SYDENHAM.

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TO

RICHARD WARREN, M. D. F. R. S.

PHYSICIAN TO THE KING AND PRINCE OF WALES.

SIR,

I TAKE the liberty of addressing the following Essays to you, not more for the sake of sheltering them under the patronage of one so pre-eminently conspicuous for his professional talents, than that I may avail myself of an opportunity of acknowledging my obligations to you for the kind and successful exertion of them in my own family.

I have the honour to be,

SIR,

Your most obliged,

and obedient servant,

Queen-Street, Golden-Square,
February 12, 1793.

JOHN CLARKE.

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P R E F A C E.

SOME years ago, in consequence of the prevalence of a very alarming Epidemic among Lying-in Women, not only in the metropolis, but also in different and remote parts of the kingdom, I was induced to offer to the public a short account of the disease.

From my situation in a public hospital, I had considerable opportunities of remarking the various symptoms which appeared, and upon comparing them with what I had seen in inflammation of the uterus, or of the peritonæum in the puerperal state, I could not but be struck with the remarkable difference between them and this complaint.

When I consulted authors, who had written upon Puerperal Fever, my embarrassment was not lessened. I found so much confusion, so much diversity of sentiment, and so great a difference in the practice recommended, that I was left perplexed with uncertainty, and disappointed of information.

As new cases arose, and when more time had given greater opportunity for the exercise of reflexion and judgment, the more I thought, the more I was satisfied that a sufficient discrimination had not been made of the febrile diseases of lying-in women.

That I might not add to the obscurity already too great, and increase doubts and difficulties already too numerous, I determined to describe things as I found them, and thought it my duty to publish the result of the experience which I had acquired, for the advantage of those, whose opportunities of making extensive observations might, from accidental circumstances, be more contracted than mine.

That epidemic gradually disappeared towards the close of the year following that in which it began, so that I have only incidentally been called to a very few cases, attended with similar symptoms, in the last four years, either in public or private practice; and as far as I have been able to procure any information upon the subject, I have reason to believe that in that time there has been but a small mortality among puerperal patients. Yet still as from the last yearly bills it appears, that of
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all females who died between the age of fifteen and forty-five, which may be considered as the child-bearing age, about one in ten were cut off in child-bed, the consideration of the diseases which occur in that state comes to be a matter of great importance. I shall not therefore require any apology for treating of them upon a more extensive scale.

To do this with the most advantage, I have found it necessary to comprehend in my plan, some account of the proper management of women in pregnancy and labour, because I apprehend that some of the diseases of child-bed owe their origin to improper treatment at those periods.

I have neither the vanity to believe, nor do I pretend that the observations in these Essays are new. Discoveries in the practical part of physic in these times are rare and hardly to be expected. The labour of ages in observing and recording cases, must have been ill spent, if much remains unknown, which is capable of investigation; and he must have either a contemptuous opinion of all his predecessors, or a more than ordinary confidence in himself, who should believe that all which has been written in

physic is false, or that after so many ages spent in vain researches, it remained for him to clear away all former errors, and propose a new and successful manner of treating diseases.

In this department of medicine, however, there has been less improvement than in the others; but especially it appears to me that diseases different in symptoms and treatment have been confused with each other.

The only merit of these Essays, if they have any, will be that of discriminating them that they may be respectively known, in order that the treatment may be adapted to the variety of diseased actions which is found to exist in the puerperal state.

There may be some, perhaps, who, influenced by former prejudices, may suppose that the distinctions which I have drawn, are not real, but imaginary. But as they have occurred within my own observation, and been witnessed by many others, capable of judging, I am satisfied that they will be found practically true.

I have been cautious of admitting any matters merely of opinion, or simply connected with theory: when I have introduced any
hypothetical

hypothetical reasoning, it is such as appeared to me naturally to arise out of the subject. For the fate of such opinions, however, I am little solicitous, in the same proportion as I consider theoretical of less consequence than practical discussions.

Before I conclude this preface, I beg leave to deprecate the severity of critical censure. I write chiefly for the inexperienced part of the profession, and in the hope that these Essays may tend to relieve some of the complaints to which child-bearing subjects the females of our species.

I have endeavoured so to arrange the observations contained in the following sheets, that they may be intelligible and instructive to those who are beginning the practice of medicine, and if those who have been long engaged in it will allow to them this share of merit, I shall think that I have not misemployed my time.

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ESSAY I.

ON THE GENERAL MANAGEMENT OF PREGNANT WOMEN WITH A VIEW TO THE PREVENTION OF DISEASE, AND ON THE RETROVERSION OF THE UTERUS.

OF those women who die in consequence of uterogestation, it is known that very few are cut off during the time of pregnancy, and not many during the act of labour; therefore it may appear superfluous to say any thing respecting the general management of pregnant women.

Yet, although upon the whole, pregnancy is not looked upon as a state of disease; and although it even seems probable that in general women, when in that state, enjoy better health than they usually do when they are not; still we know that there are some complaints which occur during their situation at that time, which are at least troublesome, and in a few instances dangerous.

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Many of the complaints of pregnancy depend upon irritation simply, and these generally yield to time; such are the sickness and vomiting, diarrhœa, &c. Sometimes, however, these admit of palliation.

Such as depend upon the pressure made by the increasing uterus upon the veins, absorbents, nerves, or other parts liable to it, are most frequently found from the end of the fourteenth to that of the eighteenth week, and again from the end of the thirtieth to the conclusion of pregnancy. Such are piles, as also varicose veins, and œdema, in the depending parts; cramp, and sometimes partial, or total paralysis of the lower extremities. These diseases will commonly be relieved by quickening at the former period, by labour in the last, and may in the mean time be so far palliated by judicious treatment, that they rarely become dangerous. In one case, however, I was called to a patient, who from inability of motion in the lower extremities, for some time before delivery, suffered a mortification of the soft parts, covering the lower part of the spine and the os sacrum, of which she died.

THE RETROVERSION OF THE UTERUS IS
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the only disease which I know of that is at all likely to become dangerous to pregnant women. This is an acquired disease, and not a necessary attendant upon uterogestation; so far from it, that in a natural state of society, I doubt very much if it would ever occur; since the customs of civilized society seem to be in all instances the occasional cause of it.

The retroversion of the uterus was first described, as we learn from Dr. Hunter, by Gregoire, a teacher of midwifery in Paris, in his lectures; but it is probable that the knowledge of it would have been entirely lost if Dr. Hunter had not investigated the subject farther. The account of his inquiries into the disease may be found in the London Medical Observations and Inquiries.

The retroversion of the uterus consists of a displacement of the uterus in such a manner that it lies transversely in the cavity of the pelvis; or with its fundus rather inclined downwards towards the os coccygis, and with the os uteri turned upwards against the posterior surface of the symphysis pubis. Upon examination per vaginam, a large rounded tumour will be found occupying the posterior part of the pelvis, and the lower lip of the os uteri will be indistinctly felt close to the

upper part of the symphysis pubis. Such a fixed situation of the uterus hardly occurs before the end of the third month, nor can after the time of quickening; because in the first case, though the uterus might change its situation, it could not remain confined, and after the time of quickening the uterus will be in the cavity of the abdomen. In thin subjects, if the hand be laid above the pubes, the full bladder will be easily distinguished; and in fatter women pressure on that part will produce a strong inclination to make water.

The effect of this change in the relative situation of the uterus will be pressure upon the rectum behind, and (which is of more consequence) upon the meatus urinæ before; whence will arise, in proportion to the degree of compression, a partial, or total suppression of urine.

I am disposed to be of opinion, from a consideration of the cases which have occurred to me, that a retroversion of the uterus is more apt to occur either in a remarkably large, or in a pelvis rather too small, and that the ordinary size of the pelvis is least liable to it. In the former, the concavity of the sacrum being great, affords a convenient lodgment for the fundus uteri; and in the latter,

the projecting angle of the sacrum is very unfavourable to a reinstatement of the uterus; if from any slight cause it should be a little displaced in its situation. Nevertheless, if the occasional cause be applied, it may happen in any form of the pelvis.

It is now understood that the fulness of the bladder is in all cases the predisposing, and in most the occasional cause of the complaint. Nothing but such a state of the bladder can draw the os uteri upwards, so as to dispose the fundus to fall under the projecting angle of the os sacrum. Hence it becomes necessary to put women on their guard against allowing the urine to be retained in large quantity during pregnancy.

For ascertaining the general cause of this disease we are indebted to Dr. Denman, and it ought to be considered as a great improvement in practice; without which, it would perhaps have been better for mankind if the disease had never been known, because it then would have been considered and treated merely as a suppression of urine: whereas when it was known that the uterus was displaced, and the suppression of urine was thought to be the consequence, and not the cause of the alte-

ration in the situation of the uterus, most violent attempts were made to replace it with the risk of doing considerable mischief to the uterus and to the bladder, neither of which would have suffered any inconvenience if the water had been drawn off, and the retroversion of the uterus never discovered.

The pressure of the os uteri against the inside of the symphysis pubis renders this operation sometimes rather difficult. It will be much facilitated by employing a small catheter, and sometimes by passing up a finger between the os uteri and the symphysis pubis, so as to afford a passage to the instrument. It has been said, that the difficulty of introduction of the catheter has been in some cases insuperable, and that it has been necessary to puncture the bladder above the pubis. I must however be permitted to observe, that it is rather singular that such a case has never occurred in my own knowledge, or even in London; and I think I may venture to hazard an opinion, that either with a small, or a flexible catheter, the urine may be drawn off, in all cases, by a person accustomed to the use of the instrument, and who is perfectly acquainted with the disease. It has also been suggested as a question,

question, Whether in such cases it might not be right to puncture the uterus so as to evacuate the liquor amnii, and by this means diminish the bulk of the uterus? But to this my objections would be still greater than to the other; both because I believe that such an operation can never be necessary, and also because it offers great violence to the uterus; the consequences of which we cannot foresee, and when that organ was never in any danger from the disease.

It has been supposed by some, that the bladder is sometimes divided into two chambers in this complaint; but this is a mistake which has arisen from the catheter not having been in the first instance pushed high enough to be perfectly clear from the os uteri, and thence, as the whole of the water was not drawn off till the catheter was carried up higher into the bladder, the idea arose of the division of the bladder into two cavities, which is next to an impossibility; because, in the first place, as the bladder is changed from its contracted to its dilated state only by the urine brought into it by the ureters; and as that urine is introduced at the lower part of the bladder, so the upper part can never have it in its power to contract so as

to retain any urine in it distinctly from that in the lower part of the bladder : and, in the second place, we can hardly suppose so perfect a partial contraction of the bladder as not to allow of the urine descending from the upper to the lower chamber.

It will not be sufficient for the removal of a retroversion of the uterus to evacuate the urine from the bladder once only : the urine should never be suffered to collect again in any considerable quantity, and therefore should be taken away at least twice in twenty-four hours. In the mean time, the ovum continuing to increase in size within the cavity of the pelvis, will at length, without any assistance, remove the uterus into the cavity of the abdomen, and the disease will be cured. In no instance which has fallen within my knowledge, has the uterus suffered any injury, so that we need not be very solicitous about it ; but cases are on record, and many more, it is to be feared, have occurred, in which the bladder has sustained great mischief. In some inflammation of it has been brought on ; in others it has burst, and the urine has been discharged into the cavity of the abdomen, and the patient has been destroyed.

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The worst consequence which can arise respecting the uterus is, that, from the pressure made upon it, the life of the foetus may be endangered, and the woman may miscarry; which, at this period of pregnancy, is rarely attended with any danger; certainly with much less than may be occasioned by violent means employed to replace the uterus.

If however the patient should be uneasy from the continuance of the complaint when the bladder has been emptied, gentle methods may be tried, of which the best is to let the patient kneel on a bed, and rest with her elbows on the floor. By this means all pressure is removed from the fundus of the uterus, and then it may sometimes be placed in its natural situation by a very gentle pressure made upon it with two fingers in the vagina.—If this should fail of success, I would strongly recommend that additional force should not be employed.

I have observed above that the fulness of the bladder is always the predisposing cause of the retroversion of the uterus. That it is generally the occasional cause too, there is now no reason to doubt. But cases have come to my knowledge where external force
applied

applied to the belly (the bladder at the time being in a distended state) has given immediate pain to the woman; and by pressing the fundus uteri downwards and backwards, at a time when the os uteri was turned upwards, has occasioned a suppression of urine.—Such cases, however, are comparatively rare, nevertheless they do sometimes happen: yet I am fully persuaded that no external violence with an empty bladder can ever produce that alteration of the situation of the uterus which is the cause of a suppression of urine; therefore, in every instance we must consider the fulness of the bladder at least the predisposing, and commonly the occasional cause.

Besides the suppression of urine occasioned by this disease, there are other symptoms, which, though not equally dangerous, still require to be attended to. If the suppression of urine has continued for some time, considerable fever will be excited, and sometimes inflammation of the external surface of the bladder. If, therefore, the patient should complain of much pain near that part, or if the pulse should be frequent and strong, with a dry and hot skin, thirst, and other symptoms of fever, some blood may be taken away with
considerable

considerable advantage. It is not necessary to mention the precise quantity; that must be regulated by the violence of the symptoms and the constitution of the woman.

Costiveness also is an attendant upon this disease, and depends upon the pressure of the fundus uteri against the rectum. This may, in most instances, be relieved by glysters frequently injected. If any attempts are made to replace the uterus, a glyster should in all instances be previously thrown up, to evacuate the fæces contained in the rectum, and the sigmoid flexure of the colon, which will, if not discharged, prove an obstacle to the return of the uterus into its natural situation by the pressure which they will make upon the fundus of the uterus.

With regard to the General Management of Women with Child, we ought always to remember, that the progress of the future labour and its consequences will depend very much upon the previous state of the patient's health. In every thing, therefore, which we recommend to pregnant women, we should consider the effects which may be thereby produced upon the labour, and upon the health of the woman afterwards.

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The natural disposition of pregnant women verges towards plethora, and those diseases which have been denominated diseases of increased action. To this cause is to be attributed the alteration in the texture of the blood, similar to that which takes place in such diseases, where the coagulating lymph is either in smaller quantity than in a state of perfect health, or has lost its power of coagulating so soon; in consequence of which the blood drawn from women in pregnancy is generally covered with a buff, the red globules having fallen to the bottom of the cake. To the same cause are to be referred the head-ach and giddiness which are so frequent at that time, and the strong disposition which we find towards pulmonic complaints. This last, perhaps, is in some measure increased by the encroachment which the contents of the abdomen make upon the cavity of the thorax, occasioned by the enlarging bulk of the gravid uterus. If this plethoric disposition and increased action be kept up, or aggravated by improper or heating food, by violent exercise or strong liquors freely and imprudently drunk, it must be apparent that the stimulus arising merely from the exertions of labour will be
sufficient,

sufficient, in a constitution so predisposed, to produce a fever.

To guard against this, women during pregnancy should carefully and industriously avoid all excess of the table, and should confine their diet to such kinds of food as neither stimulate during their digestion nor afterwards. Fruits therefore, vegetables, and a milk diet, are particularly proper, with a sparing use of animal food, strong liquors, and spices. Exercise should be taken; but it should be moderate in its degree, and, if possible, should be in a pure air.

If a woman with child should be attacked with peripneumonic symptoms, or indeed with any complaint of the chest, it is of the last importance that it should be immediately attended to before the approach of labour; because, as during labour it is indispensable to the free action of the abdominal muscles, in co-operation with the uterus, that the chest should be filled with air, so the attempt to do this in an inflamed state of the lungs must either be ineffectual or greatly injurious. On this account I would earnestly recommend the most strict attention to such complaints.

It is scarcely ever proper (except in the
weakest

weakest constitutions) to omit taking away blood from the system, because this, by immediately diminishing the quantity of the circulating fluids, contributes in a peculiar manner to relieve most diseases of the lungs.

The other methods of treatment usually prescribed in these complaints, such as topical bleeding, the application of stimulants externally, and the use of relaxants and demulcents internally, are so well known, to every medical man, that I need not enlarge upon them in this place.

By paying a constant attention to these points, we shall so conduct a woman through the state of pregnancy, that she will fall into labour in perfect health, and with the constitution prepared to sustain the violence of the exertions employed during the progress of it, and this without the most remote danger of disease being produced afterwards.

ESSAY II.

GENERAL MANAGEMENT OF WOMEN IN
LABOUR, WITH A VIEW TO THE PRE-
VENTION OF DISEASE.

THE process employed by nature for expelling the child and the placenta, consists of the action of the uterus and abdominal muscles, in order to overcome the resistance occasioned by the pelvis, and the soft parts, to the passage of the child's head through them.

In the human subject the difficulty of parturition may be chiefly referred to those wise precautions which nature has taken to counteract the evils which result from the erect attitude of the body. This has been so critically and so ably described by my valued friend and colleague, Dr. Osborn, in his *Essays* lately published, that nothing remains to be added upon the subject.

Labour in women is also liable to be affected by the operation of the mind, in which they differ from other animals; and it is well known that fear and want of confidence will
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disturb and retard, just as confidence and hope will facilitate, labour. The exercise of the voluntary powers is also capable of doing much mischief in an operation which the involuntary powers were alone intended, and are fully equal to accomplish.

There is another considerable difference between human and comparative parturition, which has not been usually noticed ; and this consists in the different structure of the placenta from that which obtains in other animals : in them the maternal portion of it continues attached to the uterus after the birth of the young, being itself an excrescence from the uterus. But in the human species the maternal portion of the placenta being a newly formed substance, consisting of cells, into which the vessels of the mother open, if by any accident any part of it should be separated from the uterus, hæmorrhage must ensue ; which, indeed, must have been fatal to every woman with the birth of her first child, upon the separation of the placenta, if nature had not wisely provided such a muscular structure of the uterus as would, and does, in the generality of cases, effectually prevent the loss of blood.

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The greater number of the evils, attendant upon labour, depend upon an irregularity in one or other of these points which I have mentioned; therefore, the care and attention to these circumstances, to which every judicious practitioner will direct his attention, constitutes a great part of the practice of midwifery, the object of which is to prevent more than to remedy evils. Real difficulties or dangers in labour are very rare; and both may often be prevented by the prudent management of natural labours, as both may be, and often are, produced by ignorance and mismanagement.

The first object of an accoucheur, upon the principles laid down above, should be to regulate the exertion of the woman's powers, and to prevent those inconveniences which are likely to be produced by the violence of them. The two things to be guarded against are fatigue during the labour, and fever afterwards.

The first may incapacitate her for finishing the labour, and may render the use of artificial means for delivering her necessary, when otherwise they would not have been required.

All waste of the strength is to be avoided, by

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taking care that the woman do not employ her voluntary exertions in the course of the labour, which, if the parts are not prepared for the exit of the child, must be hurtful, as well as inefficacious; and if they are, then such exertions will be unnecessary, because the uterus possesses of itself sufficient powers, aided by the involuntary action of the abdominal muscles, to complete the labour, time being allowed and patience exercised. All attempts to increase the frequency of the labour-pains, either by stimulating the os uteri, or by internal stimulants, on the same account should be discouraged.

Another reason for being careful to save the general strength of the system, and of the uterus particularly, is, that if the powers should have been exhausted in the delivery of the child, there will either be an unfavourable separation of the placenta; or if a flooding should supervene, from the detachment of any part of it, the uterus being exhausted, there will be no powers by which the loss of blood can be restrained, and the patient will very probably die.

The next object in conducting a woman through her labour is to guard against a fever
after

after delivery. The violence of the exertions alone have a tendency to disturb and stimulate the whole frame very much. That this disposition may not be increased, her food during her labour should be very mild in its nature, and of very easy digestion. On this account weak broths, gruel, or barley water, are much to be preferred to solid food of any kind. Solid food eaten during labour will hardly ever be digested, except by very strong stomachs; and if not digested, it will be liable to do much harm afterwards.

For this reason then, as well as to prevent fatigue, I must take the liberty of objecting very strongly to a practice, which is still very prevalent among persons in the middle and lower stations of life, that of taking during the labour a variety of substances rendered stimulating by being impregnated with spices, wine, or spirits. Nothing can be more false in principle, nor more destructive in its tendency. If a labour is going on well, there can be no occasion for them, and if ill, they are much more likely to do harm than good. If they do any thing, they will most certainly increase the action of the heart and arterial system beyond that degree which the mere ex-

ertions of labour will produce ; and this increased action will not subside when the woman is delivered. If there were any previous disposition to fever in her system, nothing is so likely to bring it into activity ; and although the labour alone might not stimulate the constitution beyond what it could bear ; or, in other words, although the increased circulation arising from the actions of the uterus might gradually go off after delivery, yet if such means have been employed as tend still farther to increase the action of the vascular system, a fever may be the consequence.

Accidental violence offered to the parts concerned in parturition will also sometimes lay the foundation of a fever ; such as stimulating the os uteri, either by too frequent examinations, or by attempts to dilate it. These practices, however, are gradually declining, and are only pursued at present by the most ignorant practitioners, chiefly by women, who, having no idea of any difficulty except that which arises from contraction of the parts, employ themselves in removing what they consider as the obstacle. But when it is remembered that the os uteri cannot be
dilated

dilated enough to allow of the head passing through it; and that, if that effect be not produced, the attempts must inevitably stimulate and inflame the part, I need offer no other reasons to a judicious (I had almost said to an honest) man, who will consider his own time of less consequence than his patient's safety, why he should avoid it. Time and patience will overcome any difficulties which may arise from the natural rigidity of the os uteri; and at the same time will do no injury either to the constitution or the parts of the woman.

Violence offered by the improper use of instruments may also become a cause of fever; therefore they ought never to be employed in any case, except where they are absolutely and indispensably necessary. He who uses them unnecessarily, and solely with the intention of saving his own time, has much to answer for, both to society and to his conscience.

I have already observed, that the influence of the mind upon a labour is not inconsiderable. The state of a patient's spirits will depend very much on the conduct of those who are

about her ; therefore cheerfulness in the demeanour of her medical and other attendants is of much importance, by which I do not mean a levity of behaviour, which suits as ill the situation of a woman in labour, as moroseness or ill humour, which, when exercised in the presence of a woman in pain, is little short of brutality, when at least she has a reasonable claim to attentive pity and compassion.

The last object in the management of a natural labour is the care of the placenta.

This part being differently constructed in the human subject and other animals, requires, on that account, a difference in the management of it. If a labour were allowed to proceed naturally, without any interference of the woman herself or her attendants, the placenta would usually come away in half an hour. We shall rarely find that it will be expelled immediately after the child.

It is not my intention in this place to enter at length into the management of the placenta, but only cursorily to deprecate the hasty extraction of it by artificial means. The introduction of the hand into the uterus for this purpose

purpose is rarely necessary, if care be taken to retard the delivery of the body of the child, which has been strongly recommended by Dr. Osborn in his late work, and which will so certainly prevent both the retention of the placenta in the generality of cases, and the chance of hemorrhage when it is expelled: that, without assuming to myself any merit from the circumstance (except that of not hastening the delivery of the child), I have scarcely ever had occasion, in twelve years, to introduce my hand into the uterus, and have never, except in one instance of a very weak and delicate patient, seen any hemorrhage, which could be considered as alarming, upon the separation of the placenta, and in that case the patient recovered. The hasty delivery of the placenta immediately after the birth of the child can never be necessary, except in cases of hemorrhage, and must endanger the life of the woman in many cases, particularly after tedious and lingering labours, where the uterus is indisposed to act. This practice, though formerly common in England, has of late been very properly discarded, so that

no prudent man at this time thinks of pursuing it.

In the greater number of cases the placenta will come away of itself within half an hour, by a contraction of the uterus; or at most only requires a very gentle assistance to remove it from the vagina, which has no power of expelling it.

The practice of hastily delivering it by introducing the hand, has been attempted to be revived at different times by bold, adventurous, and ignorant persons; but their advice and example have been cautiously followed, and therefore fortunately little mischief has arisen from the propagation of their opinions.

ESSAY III.

TREATMENT OF WOMEN AFTER DELIVERY, WITH A VIEW TO THE PREVENTION OF DISEASE. OF AFTER PAINS AND THE LOCHIAL DISCHARGE.

OF all women who die in consequence of child-bearing, by far the greater number are cut off by diseases after delivery, very few, with good management, dying during the act of labour. But although but a small proportion are destroyed during the time of labour, yet the foundation of diseases, which come into action after delivery, is often laid in the time of pregnancy by improper indulgence of the appetite; hence patients become plethoric, and have their constitutions so disposed to disease, that nothing more is required than the exertions necessarily attendant upon parturition, to produce it. If, however, the rules offered in the two preceding chapters be attended to, this disposition will be checked at least, and we shall have nothing to guard against after the woman is brought to bed, but the immediate consequences of the labour itself, and the circumstances which always attend

attend upon the puerperal state. It is impossible to believe, because it is inconsistent with the wisdom of the Creator in all his other works, that women should be so ill constructed, that they must necessarily be liable to disease from the performance of a natural act, therefore we must attribute those cases in which disease is a consequence of labour to some mismanagement either before, during, or after labour. The two former have been already considered.

With respect to improper treatment after delivery, this is partly to be imputed to the accoucheur in some instances perhaps, but much more frequently to the woman herself, either using some indulgences of the appetite, which are incompatible with her situation, or to the well meant, but ill-judged advice of friends, or the obstinacy of bad nurses.

I need not observe here how much quiet and rest immediately after labour must contribute to appease that irritation of the system which must be occasioned by the violent efforts of labour, and therefore of what great consequence it must be that all admission of company be carefully avoided. The patient should be laid in bed without being
newly

newly dressed, and above all things she should not be allowed to be in any but an horizontal posture. I have known some instances in which the woman has died immediately after delivery, from being unable to bear an erect posture of body. This is very well exemplified in the instance of bleeding from the arm, which many persons cannot bear at all without fainting, if they be upright, and all persons can sustain better, if the operation be performed whilst they lie down. Every woman must lose some blood when the placenta comes away; and although the constitution will sustain the loss very well in a supine posture, yet, from one cause or other, an erect attitude is very unfavourable to carrying on the functions of life under such circumstances.

The great object in treating women after labour, is to guard against fever. But as the constitutions of women vary extremely, so a different mode of treatment will be necessary to be observed in different women. In general it is better, I believe, to avoid animal food of all kinds, till the stimulus arising from the secretion of the milk has subsided. But even this must be done with some limitations, because

cause there are some very weak and delicate women, whom it is necessary to support by more substantial food than gruel and barley water, however proper they may be for the strong and plethoric. In patients of the latter description, it is hardly possible that too low a regimen can be pursued, because it will have the effect of diminishing the milk fever in all cases, and of rendering them less liable to the attacks either of fever or inflammation. Breathing a pure air is very necessary, therefore the chamber in which the patient is confined should, if possible, be spacious and airy; a free ventilation should be allowed, the extremes of heat and cold should be equally avoided, and all impurities be constantly removed which might contaminate the air of the room.

Women after delivery, from the fatigue of labour, have naturally a disposition to sleep and to perspire. Great stress has been laid upon the necessity of keeping up perspiration, and with this intention they have been frequently plied with draughts of heating liquors. Now, however advantageous and natural easy and passive perspiration may be, nothing can be more detrimental to the recovery of patients,

patients, than the violent and active perspiration brought on by such means, and farther encouraged by a large quantity of clothes heaped on the bed, by drawing the curtains round it, and keeping a large fire in the room. This is not nature; and the consequence of such management will be, that if by any unavoidable accident the smallest exposure to cold should happen, a fever will almost certainly ensue; or if it should not, the continuance of such sweating will necessarily very much weaken, and render the patient almost incapable of becoming a nurse.

But at the same time that it does not seem necessary to keep up sweating by such means, there is no occasion, and it would be unwise to attempt to counteract the natural disposition to a gentle and kindly perspiration the first few days after parturition, especially as it is well known that it generally attends those who recover best.

Respecting the medical treatment of women after delivery, if they are perfectly free from disease, and will be governed implicitly by the rules suggested above, perhaps no medicines are absolutely required; but it has been usual, and it certainly cannot be wrong, to

to exhibit some slight relaxant, as the saline mixture, every six hours, which will comply in some degree with the views and intentions of nature; and if there should be any disposition to fever, it will be in some measure corrected. I think I am warranted by experience in saying, that those patients who have been thus treated, suffer less from the milk fever than those where it has been neglected. Of late years the exhibition of more powerful relaxants, as preparations of antimony, has superseded the use of remedies considered so simple as saline mixture; and it has been confidently maintained that either such active remedies ought to be used, or none. But it is a question whether the interests of mankind have been served by such opinions, and general experience seems to prove, that there are some cases where advantage arises from such gentle remedies, and where those of a more violent nature have done harm instead of good.

Probably the only complaint, which really calls for the use of medicines in the early part of the puerperal state, is what is called AFTER PAINS. These rarely occur after the birth of first children. They are spasmodic contractions

contractions of the uterus either to reduce its volume to its original size, or (which is more common) to expel some coagulated blood contained within its cavity. They may indeed be in some degree prevented, or lessened, by not hastening the delivery of the placenta, but allowing it to be expelled by the contractions of the uterus. By such conduct the uterus will be more contracted than if the placenta be hastily delivered, so that there will either be less, or no room for the formation of coagula there. With all the care which can be taken after-pains will sometimes take place. If they are intended to answer either, or both of the purposes mentioned above, it is evident that their operation is, upon the whole, salutary, and on that account they ought not to be prevented altogether. But they are sometimes so violent in their degree, that they effectually deprive the woman of rest. When this is the case, it will be advisable to give such a dose of an opiate at night, as will procure sleep, and either leave them to produce their effects during the day, or only give anodynes in such small doses as to diminish the sensibility a little, so that they shall be tolerable.

Another subject to which the attention has been much directed in the treatment of women in the puerperal state, is the LOCHIAL DISCHARGE. This consists of the blood which either flows from, or is pressed out of, the extremities of the blood-vessels which had supplied the cellular part of the placenta with blood, and which upon the coming away of it open into the cavity of the uterus.

Much pains has been taken to ascertain the average quantity of the lochial discharge which comes away, with a view to regulate it, especially as the foundation of many diseases has been conceived to be laid in the redundancy, or paucity of it. But when we consider what the nature of the evacuation is, the difference of the quantity will be found to vary very much, and not to be reducible to any rule. The quantity of the lochial discharge, as well as the attack of after-pains, may be much lessened by the prudent management of the placenta: for it must be obvious, that where the uterus is more contracted, there will be less, and where it is less contracted, there will be more of the lochial discharge.

The evacuation will be at first common blood, and afterwards as the uterus becomes

comes more contracted, and the vessels smaller, it will have the appearance of bloody water; then it is of a greenish colour, and resembles serum, and at last is simply watery, till the vessels at length becoming impervious, the discharge stops altogether. In the course of these changes the appearance of blood will return sometimes even after the serous discharge has begun, from any little irregularity of diet or exercise, which increases the quickness of the circulation and the force of the heart.

Those who have considered the lochial discharge as noxious, and have attributed disease to the diminution or suppression of it, have been very anxious to promote it by various means, but such alterations are commonly the effects, and not the causes of disease, and all such measures have been accordingly found rather detrimental than useful. If there be little or no evacuation of the lochia, and the woman be in health, no remedies are required, and if she be diseased, the means appropriated to the relief of her complaints will reproduce it.

In like manner the redundancy of the lochia is rarely a primary affection, but depends ei-

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ther upon a too great strength of the circulation, or upon great weakness. In the former lessening the force of the action of the heart and arteries, and in the latter strengthening the system by bark, bitters, vitriolic acid, and other astringent remedies, will relieve the morbid state of the system, and the redundant discharge dependent upon it will cease, when the cause is removed.

The lochia are sometimes observed to be foetid, and this has often been supposed to be a proof of disease. But foetor of the lochia often depends upon accidental circumstances, where there is certainly no disease, such as a small portion of the maternal part of the placenta left behind, or portions of the decidua, which putrefy and come away, or the coagula of blood which had been formed in the extremities of the veins and arteries of the uterus, (especially if it have not acted very strongly at the time of expelling the placenta) and which putrefying and coming away, give a foetor to all the rest of the discharges.

It may be expected that something should be said here concerning the time when women should rise from their bed, and be allowed to sit up after delivery.

Great

Great stress has been laid by some on the propriety of women sitting up very early with the intention of giving a free discharge to the lochia, lest by its retention in the uterus it should be productive of mischief. This has been particularly and strongly insisted upon by a late author of considerable celebrity.

But some doubts may be entertained as to the propriety of this practice, when it is considered, that from the direction of the vagina, it is hardly possible that the lochia should be retained more than the menstruous discharge. If this be true, then it seems that some inconveniences may arise from the practice of early rising, of which one, and that not inconsiderable or unimportant, deserves attention, which is the danger of procidentia uteri being brought on; for the weight of the uterus, in the early days after delivery, will prevent the broad ligaments from restoring themselves, which they will be much more likely to do when the woman is in an horizontal, than in a perpendicular posture of body.

For this very reason, if there were no other, it seems right that no women should rise before the end of the third or fourth day, and

if they be weakly or delicate subjects, they should even observe an horizontal position longer. By this it is not meant that it is at all necessary that they be kept absolutely in bed. A sofa, or the outside of the bed, may be quite as advantageous, and will weaken less. When they begin to sit up, they should not remain in that position so long as to fatigue, else it will do much more harm than good. Indeed, it is far from certain, that an horizontal posture would not be best, for at least a fortnight after delivery, by which means all the inconveniences above mentioned will be avoided.

ESSAY IV.

ON THE MILK FEVER, AND ON THE INFLAMMATION AND SUPPURATION OF THE BREASTS.

NOTHING can be more self-evident than that nature intended that every woman should suckle her own child. With a view to this, a great determination of blood is made to the breasts during pregnancy, which thence become considerably enlarged, especially near the time of delivery. This increased circulation sometimes will occasion a secretion of milk before labour in such quantity, that it will run out of the nipples in great abundance; more commonly, however, the secretion begins after delivery, and goes on most rapidly, about the third or fourth day, whence the breasts become enormously distended and very painful. The irritation of this sometimes produces a great degree of fever in the

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system,

system, which begins often with a violent rigor, and is followed by a severe hot fit, and a profuse degree of sweating. In some rare instances delirium has taken place during the continuance of the milk fever. When it is not combined with any other disease, it scarcely ever continues more than twenty-four hours.

It may be conceived then, that very little is necessary to be done to prevent or cure a disease so short in its duration, and in itself of so small importance. But notwithstanding that, simply considered, a fever of this kind would require little medical assistance, yet, as when once excited, it may be kept up by other causes, it is right to prevent it from arising, and to suppress it directly upon its attack.

Evacuation by purging seems to produce more effect than any other means which have been employed in the way of prevention or cure.

It has been customary for some years to give a purgative on the third day after delivery, so as to procure three or four evacuations, and this especially in robust patients.

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The blood is by this means derived to the intestines from the breasts, whence the secretion becomes less, and the constitution is less apt to be stimulated. Nothing is more certain, than that patients treated in this way are less liable to any severe attack of milk fever than those in whom such evacuations have been omitted. Even after the fever has begun, the same treatment will succeed in diminishing it. After evacuation by purging, saline draughts should be given, with a small quantity of *vinum antimonii tartarificati*, and repeated every four hours, till the frequency of the pulse, heat, and thirst, have subsided.

Before I dismiss this subject, it will not be much out of place to introduce a few words upon INFLAMMATION AND SUPPURATION OF THE BREASTS, a very common disease in lying-in women, and which, in my opinion, has not been generally successfully treated.

Though I esteem it a matter of great consequence that every woman should give suck to her own infant, yet there are some who from particular circumstances of their situation in life, from great delicacy of constitution, or from some defect in the nipples, cannot suckle; and there are others, who for

some reason or other will not discharge their duty as mothers to their children.

In any of these cases the blood flowing abundantly to the breasts, the milk is secreted; but not being consumed by the child, it distends the tubuli lactiferi, which therefore inflame.

Besides these causes of inflammation of the breasts, there is another, which is the application of cold. Whether this immediately produces its effect on the breasts, or whether it only acts by making a change in the constitution, of which the inflammation of the breasts makes a part; or whether none of these is the case, and the cold produces a feverish disposition, which is terminated by an inflammation of the breast, brought on in consequence of the increased circulation, or whether sometimes the one takes place and sometimes another, it is not of much consequence here to inquire. It is sufficient for our present purpose that we know, that cold is frequently a cause of inflammation in the breasts.

The first symptom which the patient feels, is generally that of a small lump in some part of the breast, which is painful to the touch. In a few hours this enlarges so as to occupy
more

more of the gland, and sometimes the whole breast partakes of the inflammation, becoming hard and tender. The swelling either of a part, or the whole of the breast, does not depend entirely on the absolute quantity of inflammation, but partly on œdema of the surrounding parts, and it will be found to yield to the impression of the finger, especially at the lowest part.

After the inflammation has remained some days, the skin covering the part affected, assumes a red colour; and this redness is more or less diffused according to the extent of the part affected with disease. Soon it will be found that one part becomes more prominent than the rest; the skin there is thinner from internal absorption, and more particularly tender than at any other place. At length it breaks by one or more small openings, through which the matter contained in the abscess is gradually discharged, if the orifice be dependent, till, the whole being emptied, the inflammation subsides, the formation of pus is at an end, or much diminished in quantity. Milk either pure, or mixed with a serous or purulent fluid, then flows out of the orifice, which at length closes.

Sometimes,

Sometimes, however, such abscesses, left to themselves, have not so favourable a termination. A larger quantity of skin becomes interested in the disease; several orifices are formed, which afterwards, by ulceration of their edges, break into one, so that the cavity of the abscess becomes more exposed, and is longer in healing.

On other occasions, the orifice not being at the lowest part, the matter, by its pressure, produces ulceration below, and another orifice takes place at the lowest part, which discharges the remainder, and then closes.

During the progress of this disease of the breast, if it be extensive, the constitution sometimes becomes affected, with febrile symptoms, more especially in full habits. The pulse will become hard, full, and strong; the tongue will be white; there will be great thirst, sometimes pain in the head, and restlessness. When the whole breast is inflamed, the pain is sometimes almost intolerable, and so violent, as to deprive the patient entirely of sleep. After the pus is formed in it, frequent, and sometimes violent shiverings ensue, till it is discharged either by a natural, or an artificial opening.

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This complaint having been by many considered to be a deposition of redundant or hurtful milk, which, if carried back into the constitution, might induce other more violent and dangerous diseases, such as puerperal fever, swelled legs, inflammation of the uterus, and even mania ; we are not surprised to find that practical men, misled by such opinions, have been afraid of stopping it in limine. All their intentions have therefore been usually directed to the forwarding of the suppurative process, and giving a free evacuation to the pus, when formed, by making a large opening.

We have accordingly been advised to use emollient and anodyne fomentations, and poultices to the part inflamed, during the inflammatory state, both to give ease to the patient, and to hasten the formation of matter.

From having had frequent opportunities of observing the effects of this mode of treatment, I have had abundant reason for being dissatisfied with it, and there seems to be no good reason why this inflammation should be allowed to run on to suppuration, if it can be prevented. Much present and future inconvenience

venience will be spared to the woman, if the cure by resolution be attempted at first.

If she should be of a strong constitution, and the febrile symptoms or inflammation be considerable, bleeding from the arm will be necessary, and also evacuation by purging, in order to diminish the quantity of blood, and the strong action of the vessels. To further the same intentions, her food should be purely antiphlogistic.

The next object is to diminish the circulation in the part. Blood should therefore be taken away by the application of three or four leeches, inclosed in a wine glass, till they have fastened on the most inflamed part; which may be allowed to bleed for some time after they have dropped off.

Evacuation, by purging every day, so as to procure two or three stools, besides its advantage on the general principle, is farther useful, as it produces a determination to the intestines, and therefore necessarily draws off the circulation from the breasts.

I have mentioned above that I have objections to the use of fomentations and poultices, and I beg leave here to state what they are. In the first place, by their warmth they de-

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rive a large quantity of blood to the parts, and in the next, by their relaxant power, they weaken the tone and strength of the parts to such a degree, that if matter should inevitably be formed, which, when it happens, is generally in a large quantity, the abscess is always very difficult of healing, especially if a large opening should be artificially made into it. Instead, therefore, of such applications, it will, I think, be found that much more utility will arise from the use of solutions of lead * constantly applied cold to the part inflamed, even though it should be the whole of the breast. The advantages of this mode of treatment are several:

1. The cold repels the blood from the part, which is farther assisted by the astringent quality of the lead, and hence the inflammation is lessened.

2. The breast is not weakened, so that if an abscess should be formed, it will be sooner filled up with healthy granulations.

3. If the inflammation should be diminished, the woman will suffer less pain, and

* I am in the habit of recommending a solution of a drachm of cerussa acetata, in two ounces of acetum distillatum; to which may be added an ounce of rectified spirit of wine, and five ounces of distilled water.

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there will be less affection of the constitution.

4. Matter will either be not formed at all, or if formed, it will be in less quantity, which will shorten the duration of the disease.

If there should be much pain, it will be right to employ a sufficient quantity of opium in a saline draught, every six hours, to appease the violence of it.

If this plan has been undertaken early, and pursued with strictness and punctuality, the inflammation will often be altogether suppressed. But if medical assistance should be called too late to produce a complete resolution, the extent of the suppuration will be very much lessened.

Let us suppose, however, that the breast should suppurate, and that the fluctuation of the matter can be distinctly felt under the skin; I would still advise that the saturnine lotion should be continued, without intermission, till the abscess points, when, if the pain be not very great, and the skin do not seem likely to be very largely involved in the disease, it may be allowed to break spontaneously; and if the opening should be too small, it may be easily enlarged, by introducing a small piece

of sponge tent, with a bit of thread fastened to it, to prevent it from slipping into the cavity, so as to make the orifice as large as the barrel of a small quill.

But if the pus be very near the surface, and it should seem probable that the skin will give way very largely, or if the pain should be insufferable, then it is better to make a small artificial opening of the size mentioned above, with a lancet, and to discharge a part of the matter, which will give great relief from pain.

The whole should not be emptied in one day, because then the cavity will be large, and will always fill with great difficulty, and take up a long time. On the contrary, supposing that it should appear to the surgeon that the abscess contains eight ounces, it is not right to let out more than half an ounce, or at the most an ounce, and then the orifice should be filled with lint or sponge tent till the next day, when it should be taken out, and more discharged. This should be repeated for several days, till the whole is evacuated.

By this treatment, the sides of the abscess will contract themselves, independently of granulation,

lation, till the cavity would at length not contain a fourth part of the pus which was originally within it. When once the whole has been discharged, it should be kept empty by squeezing the matter thoroughly out at least twice in a day. After some time, the nature of the discharge changes, from being purulent, to a ferous, and lastly, to a milky appearance, which proves that the parts have re-assumed an healthy action, and then the orifice will close, even though we might attempt to keep it open.

I was led to the trial of this manner of managing the suppuration of the breasts, from having seen very troublesome and bad consequences from making large openings, and dressing them from the bottom, by introducing great quantities of lint. It is true that granulations will quickly form, and, in some cases, will soon fill up the cavity of the ulcer, but they are always weak, easily separable from each other, pale, and apt to bleed profusely on being roughly touched, especially if fomentations and poultices have been employed; and the skin will not form upon them. The quantity of discharge joined to the irritation, from a large sore, weakens the strength of the woman, sometimes produces hectic symptoms,

symptoms, during the continuance of which, the sore puts on a worse appearance, and is at last with difficulty healed, sometimes after many months, and even then not without the use of bark, wine, country air, and other tonic and cordial remedies.

There is one, and only one inconvenience, which arises from the mode of treatment advised above, which is that of a second orifice being formed at the bottom of the breast, in consequence of the pressure of the matter downwards. But this seldom gives much pain to the patient, or trouble to the surgeon, as it commonly heals very soon.

Whatever treatment is pursued in suppuration of the breasts, a hardness will often remain for some time in the part which had been the seat of the disease. This generally yields to time, but its disappearance will be much assisted by the use of a liniment, consisting of one part of camphor, and four of oil, twice or three times in a day; which, on the whole, I prefer to mercurial liniments, because it is more cleanly, and is not followed by any unpleasant symptom, such as salivation, which sometimes in delicate habits occurs, from employing a very inconsiderable quantity of mercurial ointment.

ESSAY V.

ON THE OTHER INFLAMMATORY AND FEBRILE DISEASES ATTACKING WOMEN IN THE PUERPERAL STATE.

SECTION I.

IN the writings of physicians, whether in ancient or more modern times, we find very few (and those chiefly detached) observations on the diseases to which women in the puerperal state are liable, and yet it is remarkable that they are often of a very serious nature, soon proving fatal, and sometimes carrying off great numbers of patients in a short time. The reason of this apparent negligence is, that in most countries the practice of midwifery, and the subsequent treatment of lying-in women has been committed to women, the nature of whose education did not lead them to make, or record any observations. Among the ancients, as at Athens, attempts were made occasionally to rescue this department of physic from the hands of ignorant

women ; but rooted and inveterate prejudices do not readily yield to innovation, however useful it is likely to prove, and mankind have often shewn an inclination to remain in voluntary error rather than be at the trouble of changing former habits, respectable only for their antiquity. It is now scarcely a century since men of science have devoted their attention to the practice of midwifery. When we consider how short a space of time has elapsed, it seems more surprising that so much should already have been, than that more has not been done, especially when we reflect that on the one hand the progress of the art has been obstructed by the delicacy of women, and on the other opposed by prejudices, suggested by interest, and artfully propagated by many practitioners in the other branches of physic. The management of parturition, however, under all circumstances, is now very well understood, and the rules for practice have been rendered plain and perspicuous.

Parturition, in its most natural state, certainly is not exposed to much danger ; yet luxury, and unnatural modes of life, have subjected women to difficulties in labour, and diseases consequent to it of such importance, that

that notwithstanding all the opposition which has been exerted with such industry against the practice of midwifery, women have at length sacrificed false ideas of delicacy to the more weighty consideration of self-preservation.

Still, however, our knowledge of the diseases following parturition remains very confined: not, indeed, for want of attention to them, but because perfection is seldom attained in the infancy of any science. Much has been written upon the subject by men of the first abilities and reputation for medical knowledge in this country and France; and if still there remains much obscurity, we must impute it partly to the difficulty of making any subject clear at once.

Another cause has impeded that advancement in the knowledge of these diseases, which would otherwise have been perhaps better understood, which is, that every disease attacking women after delivery has been called Puerperal Fever. This has created great confusion, so that symptoms the most opposite in their nature have been, by different authors, supposed to characterize the same diseases; and they have recommended modes

of treatment no less contradictory to each other, than their description of symptoms, and their opinion of the disease.

The name of Puerperal Fever having been given indiscriminately to every febrile disease attacking women in child-bed, has thus become a source of much inconvenience. Practical men, misled by this false bias, have persuaded themselves that the form of disease, which respectively they may have most frequently met with, is the only one; and that authors, who have described a disease under any other form, as attacking lying-in women, must have either been mistaken in, or must have mis-stated the appearances of, the disease, and have erred in the mode of treatment.

And yet, when we consider that many of the writers have been men of acknowledged reputation in the profession of physic; men engaged in practice, and not addicted to the whims and fantasies of theory, we must conclude that their descriptions have been drawn from nature, however dissimilar they may appear. But they have been led to conceive all cases, which did not accord with their idea of the disease, as anomalies; and have not given themselves leave to inquire whether a woman

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in child-bed may not be attacked with very different complaints.

A review of what has been said by different authors, will soon satisfy us of the truth of these observations *.

Some writers consider the disease as a fever of the inflammatory kind, of which the affection of the abdomen is symptomatic.

Others consider the disease as an inflammation of some of the contents of the cavity of the abdomen, of which the febrile appearances are symptomatic, and have accounted for it by supposing that, from the sudden removal of pressure from the blood vessels at the time of delivery, a greater proportion of fluids than circulate there in a natural state may rush upon some particular part, and, from a very slight obstruction, may cause a local plethora, and so inflammation. The inflammation has been farther accounted for by bad manage-

* I shall confine my remarks chiefly to what has been written on the subject in later times. The inquisitive reader, who is desirous of knowing what the old writers have said on the diseases of women in child-bed, will find many sensible observations scattered in their works, from the time of Hippocrates to that of Sydenham; after whose time midwifery began to be cultivated in England as a branch of medicine.

ment in the time of labour—by rude treatment of the os uteri—by violent and hasty extraction of the placenta—by suppressions of the lochial discharge—by translations of the milk, &c. Among those who have considered the disease as a local inflammation, there has been much difference of opinion as to the part which they have conceived to be the subject of it. The uterus, ovaria, omentum, intestines, peritonæum generally, or of a particular part, have been all in their turn supposed to be the particular seat of the inflammation.

This having been considered as the nature of the complaint, the symptoms have been described corresponding thereto; such as rigor, pain, and tumefaction of the abdomen partially or generally; heat, thirst, a dry white tongue, a hard, full, and strong pulse, &c.; and the inflammation has been said to terminate either by resolution, suppuration, or gangrene, with the symptoms belonging to these states.

The treatment recommended has been conformable to the idea entertained of the disease, and consists of repeated evacuation, by bleeding and purging through the whole disease, which

which have been described as almost specifics, and to be employed even in weak and delicate habits. Antimonials have been also recommended, with a view to encourage sweating, vomiting, or purging; and opiates to quiet pain. To these general modes of treatment some have added the use of topical bleeding, blistering the abdomen, fomentations, &c.

Other writers, on the contrary, think that the puerperal fever has evident marks of putrescency, the cause of which has been traced, to misconduct in the early part of pregnancy; such as tight stays and petticoat bindings, which, together with the weight of the uterus, detain the fæces in the intestines, the thin putrid parts of which are taken up into the blood. This is followed by loss of appetite, in consequence of which bile is collected, becomes putrid, and is absorbed. Small and crowded rooms, strong liquors, a confined air, and too much lying in an horizontal posture, (which, by detaining the lochial discharge, is supposed to occasion the putrefaction of them) are considered as the immediate causes; and the disease itself is said to be of the same genus as the hospital or jail fever.

The symptoms described are those usually
found

found in malignant fevers, together with foetor of the lochia, swelling and pain of the abdomen.

With such ideas of the disease various means have been recommended by way of prevention, to counteract the predisponent, and avoid the occasional causes of putrefaction.

Bleeding, blistering, purging, sweating, and all extraordinary evacuations on this principle, are to be avoided, but emetics are advised to be frequently given to promote the evacuation of putrid saliva, and of putrid juices supposed to exist in the stomach and duodenum.

The rest of the treatment consists of means to prevent a waste of strength, and to resist, or cure the symptoms of putrescency.

Besides these general opinions, some have considered the disease as being originally inflammatory, but soon verging to putrefaction.

I have taken these different accounts from authors of whose accuracy the public has with justice entertained a good opinion ; and I shall endeavour to reconcile these diversities of sentiment and practice, by supposing that they have described different states of disease under

der the same name; and I shall, in the sequel, take notice of the various febrile and inflammatory complaints which I have had the opportunity of seeing in puerperal women.

It appears to me absolutely impossible to reconcile such diversities of opinion in men of good practical information, upon any other principle than that which I have mentioned of their applying the same term to different complaints.

To avoid falling into a similar error, when I was engaged in describing the epidemic fever, which attacked women in the puerperal state, during the years 1787 and 1788, I determined not to give any name to the disease, but simply to collect the facts, and describe the complaint, as I found it, without any bias to any particular system, and without endeavouring to reconcile the appearances with those which had been noticed by any of the preceding writers on puerperal diseases.

This appeared to me to be the best way of communicating such observations as I had made, and, at the same time, of avoiding controversy.

Since that time, having bestowed much time and reflection upon the different cases of puerperal

peral disease, which have fallen in my own way; having compared these with the cases and observations recorded in authors of reputation; and lastly, having in conversation with my medical friends met with much of useful information upon the subject, I thought that it might be of some advantage, at least to young practitioners, if I should arrange in some order the result of the whole.

Yet, although I have bestowed considerable time and attention upon it, I am well aware of the difficulty of the task which I have undertaken, and I trust to the candour of the reader that he will, on that account, overlook many errors which he will meet with in these pages.

Being thus far engaged I am unwilling to recede, yet I cannot but wish that my abilities were equal to the desire which I have of rendering this subject better understood than it seems to me hitherto to have been. Whether I shall, in any degree, contribute to the attainment of this desirable object, it must be left to the practical part of the profession to decide. If I shall have set the matter, in any degree, in a better light, and by my labours shall have contributed, in the smallest manner,

manner, to lessen the sufferings, and by that means alleviate the misfortunes to which the state of child-bearing is liable, my expectations will be fully satisfied, and my trouble will have found a sufficient reward.

SECTION II.

ON INFLAMMATION OF THE UTERUS AND
OVARIA.

It has been already observed in the course of these Essays, that the process of labour is composed of a resistance to be overcome, and of the exertions which are destined to overcome it. The resistance arises from the size of the child's head, the comparative smallness of the pelvis, and the rigidity of the soft parts. The powers employed to effect the passage of the child are the actions of the uterus and of the abdominal muscles, which exert themselves first by pressing on the membranes, and afterwards, when the liquor amnii is discharged, upon the body of the child. In the early part of labour too, it not unfrequently occurs, that the lower segment of the uterus is protruded into the cavity of the pelvis along with, because covering, the head of the child, and in this situation is squeezed between the head and the sides of the pelvis.

Considering all these circumstances, it will appear evidently, that many causes of violence, or injury to the uterus, and the peritoneum covering it, as also to the lower part of the bladder and its peritoneum, will be applied in a natural labour.

Long continued actions of the uterus exerted upon the body of the child, can hardly happen without inconvenience, and the violent pressure made upon the soft parts, by the impaction of the head, will farther add to the chance of injury. Besides these, it is to be feared, that in some cases the improper use of instruments, especially of the vectis, by those who employ it, because it can be secretly used, may have done still more violence*. Hence might arise inflammation of any of these parts, which would produce symptoms according to the nature of the parts inflamed, and the extent of the inflammation.

But though all these causes of inflammation are applied, the effect is generally prevented by the topical discharge of the lochia,

* The impropriety of using instruments merely to save the time of the accoucheur, and therefore in cases where none are required, has been with great justice reprobated by Dr. Osborn, in his Essays lately published.

which therefore, though a necessary consequence of the separation of the placenta, answers the secondary purpose of preventing those evils, which otherwise would be very likely to arise.

Another cause co-operating to the same end is the accession of the milk about the time when the lochial evacuations begin to diminish in quantity. This revulsion of the blood from the uterus to the breasts, effectually defeats that determination to the uterus which is so necessary to the support of inflammation there.

But, notwithstanding these wise precautions of nature, inflammation of the uterus sometimes takes place from the causes recited above; to which may be added, exposure to cold, as by taking patients early out of bed after delivery, a practice deservedly reprobated by Sydenham. This has a general tendency to throw the circulating fluids upon the internal parts. That direction of the blood to the uterus, which obtains during pregnancy, naturally induces the flow of them to that viscus in preference to any other part. This, and the predisposition in consequence of labour, produces an inflammation in the substance

stance of the uterus, which, though sometimes it appears distinct and uncombined with any other disease, yet is often communicated to the peritonæum covering it, and to the neighbouring parts; as, for example, to the ovaria and Fallopian tubes. Inflammation having once begun, the natural functions of the part when in health become disturbed; thence a suppression of the lochia will be brought on, and so an increase of the disease.

Inflammation of the substance of the uterus, when it exists simply, is tolerably well marked in its symptoms. It usually begins about the second or third day after delivery, and is first known to exist by a sensation of pain felt at the lower part of the abdomen, which gradually increases in violence, and is distinguishable from Afterpains by its constancy. Afterpains are intermittent like the pains of labour, depending like them upon contractions of the uterus, whilst the pain of inflammation of the uterus arises from irritation of the nerves of the part, which is therefore constant. The patient complains much if any pressure be applied to the uterus. On examination externally the uterus will be found larger than its common

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fize. It is also harder to the feeling, resembling almost the firmness of a stone.

I know nothing of the state of the os uteri by any examination of the living body, because it is not customary to examine it in such cases, and it would most probably be attended with no advantage; but in one case, where I had an opportunity of inspecting the body after death, it was in a more contracted state than is usual at that period after delivery. This may not be the general state of it, but I think it right to mention this, as I have once found it. Farther observation will confirm, or reject it.

Soon after the symptoms which have been mentioned, marks of constitutional affection sometimes appear in an increase of heat all over the body, a white and dry tongue, thirst, pain in the head, hardness, fulness and strength of pulse, (when the complaint occurs in strong habits) and in all cases frequency from 100 to 120 beats in a minute.

Very soon after the attack of the disease, the stomach is apt to become affected with sickness and vomiting. As this symptom is not constant, may it not depend upon the affection

affection of one or both of the ovaria, in particular cases, as there exists a strong connexion between those parts and the stomach? In most cases the patient expresses a sense of great pain in the back, and shooting into the groins. The lochial discharge is usually much diminished, and sometimes altogether suppressed; and the secretion of milk is, for the most part, interrupted.

The bowels are variously affected in this disease: at first they are often costive, but afterwards they frequently fall into purging, which, in some cases, proves useful, by diminishing the symptoms of inflammation.

The urine is for the most part high coloured, depositing sometimes a pink coloured sediment, when we have an opportunity of seeing it unmixed with uterine discharges. It will sometimes be found, where the disease has communicated with the neck of the bladder, or when both the uterus and it have suffered, that suppression of urine will take place, so that the catheter must be employed two or three times every day to draw it off.

If the inflammatory symptoms should not run very high, the abdomen does not swell;

but if they should, then the inflammation attacks the peritonæum, and new symptoms arise, such as take place in the disease to be next considered, and then it becomes a mixed case.

In the progress of the disease it frequently happens that slight shiverings take place at various times in the day, and the face of the patient becomes occasionally flushed. Under these circumstances the tongue puts on a fiery red, or scarlet appearance. The pulse after this generally increases in frequency and weakness, symptoms of general irritation succeed, and the patient is often cut off in a short time. Now and then, however, a flow of foetid lochia relieves the symptoms—the pulse becomes less frequent—the flushings appear more seldom—the tongue becomes paler—and the skin, which before had been hot and dry, now relaxes, and is cooler; a spontaneous diarrhœa comes on, and the patient recovers.

The chance of recovery is far greater when no shiverings have taken place, nor flushing of the face, nor any of those unfavourable symptoms described above; but where the uterus gradually becomes softer and less tender,

der, where the lochial discharge returns in its usual quantity and quality, and the secretion of milk begins again.

A sudden cessation from pain, succeeded by evident marks of depression of strength and delirium, is not so commonly met with as a fatal symptom in this disease, as in that which is next to be described. When this disease kills, it is usually by symptoms of irritation.

Upon examining the bodies of women, who have died under this disease, we have found little or no extravasated or secreted fluids in the cavity of the abdomen, when the disease has existed simply. The peritonæal surfaces have been also discovered free from disease in some cases; in others, however, the peritonæum which covers the uterus has been partially inflamed, and that covering the posterior part of the bladder. Inflammation is often observed running along the Fallopian tubes, which, when cut open, will be seen loaded with blood. The ovaria too are often affected in the same way.

The uterus will commonly be found very firm in its substance, but larger than when naturally contracted. Upon cutting into the substance of the uterus, pus is often found,

which, in all the cases I have met with, is situated in the large veins of that part. Pus is also sometimes found contained in the cavity of the Fallopian tube, and also in the substance of the ovaria, which are distended by inflammation and matter, so as to equal in bulk, in some cases, a pigeon's egg.

I never had occasion to meet with any case in which mortification had taken place in any part of the substance of the uterus, except in one instance, where there was a gangrenous appearance of the cervix: but it is to be remarked, that instruments had been employed in that case by the gentleman who attended the labour.

I am well aware that mortification has been often described as having taken place in the uterus; but I am persuaded that this has been chiefly said to happen by persons not habituated to examining the bodies of women who have died in child-bed, from their mistaking the appearance of that part of the uterus, where the placenta had adhered, for gangrene; whereas, it is commonly only the remains of the maternal portion of the placenta, and of the coagula of blood formed at the extremities of the large vessels of the uterus upon the separation of the placenta. A very little
attention,

attention, by scraping off gently this substance, will detect the sound internal surface of the uterus underneath.

This disease, as far as I know, has never been epidemic, nor is it likely that it should; but it occurs, on the whole, more frequently in the country than in large towns, on account of the difference in the state of the atmosphere disposing more to inflammation.

It also is found more in women of robust, than weak constitutions, and especially in those who have indulged an appetite for heating food and spirituous liquors during pregnancy, and immediately after delivery.

It is reasonable to be believed, that a slight disposition to inflammation in any viscus, which, with a proper attention to regimen, &c. might subside, will be very likely to be called into activity by such irregularities. Indeed, I think that I have seen many cases where there has been some degree of constant pain and tenderness at the bottom of the belly after delivery, in which the disease has been altogether prevented by a careful attention directed to those circumstances, which have a tendency to subdue the causes, or shorten the continuance of inflammation, but which are

too well known to every practical man to require any description here.

The prevention of the disease altogether may be very much assisted by attention before and during labour, to the management of the woman, according to the plan suggested in the first, second, and third Essays.

Of all the serious complaints which attack women in the puerperal state, I believe this to be the least fatal, and most within the possibility of relief from medical assistance, if it be early attended to. The attack being accompanied with pain, and often succeeded by constitutional symptoms, gives quickly alarm both to the patient and physician. The symptoms sufficiently pourtray the nature of the disease, and then the mode of relief which should be attempted is distinct, and will very frequently be attended with success, if the form of the disease be simple.

Every art, which has a tendency in any manner to diminish the quantity of the circulating fluids, and weaken the action of the heart and arteries, should be employed in order to subdue the inflammation at the very outset.

Bleeding, therefore, from the system, (in
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strong constitutions, and in the country more especially) should scarcely ever be omitted. Almost the whole of the success depends upon this being performed early. The quantity must be regulated by the constitution of the woman, the violence of the symptoms, and the state of the pulse. In the repetition of the operation we must be governed by the same circumstances, and the effect of the former evacuation upon the disease; and it must be observed, that it will frequently be found necessary not only a second, but a third time. In less robust patients, it will be found expedient, if the symptoms, having been diminished, are not entirely carried off by the first bleeding, to take away more blood by the topical application of six or more leeches, inclosed in a basin, to the belly: if it be desired to continue the discharge of the blood upon their falling off, it may be effected by the use of warmed flannels laid on the belly.

Fomentations of camomile flowers, and the heads of poppies, (the cloths used for the purpose being sprinkled with camphorated spirit) are also of service in alleviating the pain and disposing the patient to a gentle perspiration. The greatest care should be taken in removing
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and applying the clothes that the sheets be not wetted, nor the patient exposed to cold; and when the operation of fomenting is finished, it will be found advantageous to make the skin quite dry, and then anoint the whole abdomen with some warm oily liniment, such as a mixture of an ounce of oil of olives with two drachms of camphor, and a drachm of oil of cloves.

From blisters applied to the abdomen, so useful in many other occasions of internal inflammations, I cannot say that my own experience leads me to promise any advantage. On the contrary, they have often increased the frequency of the pulse very considerably, and the irritation in the system at large.

Besides, I have more than once known the effect of the cantharides absorbed to be that of evidently producing an inflammation in the kidneys, along the whole course of the ureters; in the bladder and meatus urinæ, attended with great pain in addition to the other symptoms. On these accounts, I am not sure of the propriety of using blisters in this disease; nevertheless, as they are of great use in many other cases of internal inflammations, as in pleurifies and peripneumonies, &c. I would
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not too strongly discourage their use, although I have not been so fortunate as to find much benefit from them.

Neither can I recommend a course of purging as serviceable in the inflammation of the uterus, which follows delivery. It is always, I believe, right in the first instance, to procure two or three evacuations from the intestines; but afterwards, it will be enough to preserve the regular motions of the bowels, by giving, from time to time, small quantities of castor oil, or a little rhubarb mixed with other medicines, which may be proper. The objection which I have found to long continued purging is, that it has always the effect of preventing that gentle perspiration which, if it can be produced and kept up, will do more towards curing the disease than any remedy which I know.

This practical opinion may seem to militate against an observation which I have made above, that a spontaneous diarrhœa sometimes relieves the patient. But I beg leave to observe, that there may be a considerable difference between the effects of a natural, and an artificial diarrhœa. In the first, a determination being produced from some action in

the constitution, which we do not understand, the inflammation in the uterus ceases : but in the second, though we may bring on a purging, yet, as the evacuation may not be the only change which is wrought, where the diarrhoea is spontaneous, so that alone may not necessarily cure the patient ; and if it do not, then it may do harm, both by its effect on the perspiration, and by its determining the circulation to the interior parts of the body.

Next to the diminution of the action of the vascular system it is of consequence to produce, if it be practicable, a gentle perspiration, which is eminently advantageous, as has been remarked above. Small doses of antimony and opium, with the addition of a little rhubarb, in a pill, which may be followed by a saline draught every six hours, answer this purpose very well. The opium tends to quiet the pain, and the rhubarb secures a regular action of the intestines, without violently purging. About three grains of the antimonical powder, with the same quantity of rhubarb, and half a grain of purified opium, for a dose, will commonly succeed. The dose of the antimony should not be so great as to bring on vomiting. The opium may be in-
creased

creased both in quantity, and in the frequency of repetition, so as to quiet the pain, which alone will aggravate the disease. Besides, unless relief from pain be procured, the patient will be entirely prevented from sleeping, and will fall into symptoms of irritation.

Indeed, except where there is reason to suspect the existence of undigested, or indigestible substances in the stomach, the action of vomiting should always be avoided, inasmuch as it constantly adds to the pain by the agitation which it occasions, and the pressure made by the muscles on the inflamed uterus.

If during the course of the disease a spontaneous diarrhoea should come on, it should not be interfered with farther than by taking care that the strength of the woman be not reduced too much by it. If, however, the evacuations should be very frequent and copious, it will be proper occasionally to administer some of the cretaceous mixture, with a very small quantity of ipecacuanha and opium, so as to moderate without stopping the diarrhoea.

If, by any of the means recommended above, the violence of the disease should have been subdued, the plan is to be continued through
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the whole course of it, or till we believe that the patient is free from danger.

But if, notwithstanding the use of the remedies advised above, the symptoms should continue with unabated force, it will be best to wait, as has been recommended in another case by Sydenham, and trust to the powers of the constitution; since, if we do not succeed at first, we shall not be likely to gain much ground by the pursuit of the same plan for any great length of time, and we may interrupt the efforts of nature.

In the course of this disease, I need hardly mention that the food of the patient should be of a mild nature, and such as is of very easy digestion. Animal food of all kinds, and every sort of fermented liquor, should be strictly avoided.

If, after the symptoms have continued for several days, shiverings should attack the patient, it is almost certain that suppuration has taken place. Here I fear little is to be done by medicine. Many under these circumstances will necessarily die. If the suppuration be in the veins of the uterus, or in the Fallopian tube, the pus may possibly escape into the cavity of the uterus. But if it should be situated (as I have seen it) in the ovaria, the only modes of evacuation will be either by absorption
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tion of it, or by its breaking into the general cavity of the abdomen, or by adhesions forming between the ovarium and the parietes of the abdomen, and so, absorption going before the matter, it may be discharged externally. Of the former we can have no positive evidence, and I much doubt if it often happens. Of the second, I never met with an instance. Many cases are recorded of the latter. My own experience has only furnished me with a single instance of a circumscribed abscess following any inflammatory affection in the cavity of the abdomen of a puerperal patient. This broke at the navel some months after delivery, but the event of the case never fell within my knowledge.

I am apt to be of opinion that the suppurative stage of the disease most commonly destroys the unfortunate patient, as I have opened several bodies with confined suppuration in the uterus and ovaria.

As the effect of matter under such circumstances is to excite irritation, such sedative means as are usually employed in internal suppurations, as the decoction of *sarsa* with opium, may be had recourse to, but little I believe is to be expected from their exhibition.

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The woman evidently loses flesh and strength; the countenance becomes pale and fallow, unless when it is flushed with hectic patches of red; the palms of the hands and soles of the feet are affected with burning heat; the pulse becomes small, frequent, and of a wiry hardness; the eyes become hollow, and the face anxious; colliquative sweating ensues; at length the extremities become cold, and the patient sinks and dies.

SECTION III.

ON THE INFLAMMATION OF THE PERITONÆUM, OR INVESTING MEMBRANE OF THE CAVITY OF THE ABDOMEN.

FOR some reason or other, there seems to be a great aptitude in the peritonæum to be inflamed in women after delivery, so that causes applied to the body, which generally have a tendency to excite inflammation of internal parts, seem to be peculiarly directed, in their operation, to this part, during the time of child-bed. Hence this disease is very frequent, and has also been called Puerperal Fever.

It has been conceived that this predisposition might depend upon some change in the state of these parts, or of the cavity of the abdomen succeeding to the act of labour, or the contraction of the uterus. Yet it seems not to be conformable to the wisdom of nature, to construct parts so that the circumstances to which they must necessarily be exposed, in a state of health, should either prove a predisponent, or an immediate cause of disease.

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Moreover, the alteration of the state of the cavity of the abdomen is so frequent an occurrence, and this complaint is comparatively so uncommon, that it is hardly credible that so many should escape, and so few be liable to its influence.

In some cases the pressure made by the child's head in entering the upper aperture of the pelvis against the peritonæum, either covering the cervix uteri, or the bladder, may predispose to, if it do not actually produce the disease; and I believe that it is often an occasional cause. It may be said, that this also would more frequently produce the disease, than we find, in fact, that it does. But on the other hand, it should be remembered, that it is only in cases where the head is comparatively large, that so great a degree of pressure can happen as to occasion disease. Where the head is small in proportion to the upper aperture of the pelvis, or is of the usual size, any violent degree of pressure can hardly take place, which is the reason why the disease does not occur after every labour.

Besides this cause of peritonæal inflammation, the application of cold externally is another, which, added to any slight injury which
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may have been occasioned by labour, and and which alone would not have produced disease, will be very likely to bring on inflammation of the peritonæum. Tight binding of the belly after delivery has, in many cases, brought on the disorder; as also large quantities of heating liquors drank after delivery, against the use of which I have already given some cautions.

If one may be allowed to judge from the sensations of the patient, the inflammation begins in some cases, in a small part of the membrane at first, and is afterwards communicated to the whole; in others, it would appear to attack the whole at once. In the first instance pain, in some particular part of the abdomen, is the earliest symptom; whilst in the last, we commonly find in the commencement of the disease a general tenderness of the whole cavity of the belly. This tenderness of the abdomen usually increases very rapidly when it has once commenced, and as the pain increases, tumefaction begins, and extends till the swelling, in the course of the disease, is nearly equal to the size of the belly before delivery.

Various local and constitutional symptoms arise in the progress of the disease, which strongly characterize it and distinguish it from other affections. The constancy of the pain distinguishes it from After-pains, and the universality of it discriminates it from inflammation of the uterus. All the internal lining of the abdomen being in an inflamed state, the pain of the woman becomes to a violent degree increased by the smallest pressure made upon it, even by the bed-clothes. All motion disturbs her very much, especially active or voluntary motion, so that she is entirely incapable of turning herself from her back to her side, or from one side to another, and is therefore absolutely confined to one posture.

Many particular local symptoms arise from the affection of the peritonæum, investing particular parts, such as constant sickness and vomiting of bilious matter, when the stomach is attacked. This matter seems to be greatly increased beyond the natural quantity secreted in health. The state of the action and secretion of the intestines is very various. Sometimes their actions appear to go on naturally; at others, violent diarrhœa comes
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on, and the fæces are evidently mixed with a considerable portion of bile. The functions of the bladder too become affected, especially by a constant inclination to evacuate urine, which comes away frequently, and in small quantity.

A difficulty of breathing will be found most commonly, especially in the violent states of this complaint, which depends upon the great distention of the whole abdominal cavity, which consequently encroaches upon the thorax, presses on the diaphragm, and impedes the free action of the lungs.

In consequence of the general derivation to the bowels, the secretion of the milk, as in the disease already described, becomes diminished, or entirely stopped, and the breasts, which before the onset of the disease had been tumid with milk, become flaccid and empty.

The lochial discharge, for the same reason, undergoes an alteration, and this commonly consists in a suppression of it altogether.

The constitution soon becomes affected with this disease. A general heat of the whole body, with flushing of the face, and redness of the eyes, come on. The tongue becomes very white and dry, attended with insatiable

thirst; the skin is dry, parched, and hot. The heart and arterial system shew themselves to be affected, by a considerable increase in the frequency and quickness of the pulse, which is also for the most part small, and very seldom hard.

In the progress of the disease, towards the destruction of the patient, all the symptoms become aggravated. The pain in the belly becomes hourly more and more violent. She is compelled to lie entirely upon the back, from the pain becoming excruciating on any attempt to move. For the same reason the legs are drawn up towards the belly. The pulse increases in frequency, the respiration in difficulty, and at length, when the patient has been suffering the most acute pain for many days, there is at once a total cessation of it. From this time the pulse is more frequent, and loses its strength; paleness, coldness, and clammy sweats, appear in the extremities, and about the face. The urine and fæces come away involuntarily. The mind becomes unstable without any violent delirium, and the patient almost insensibly slides into death.

It may be considered almost as a mortal symptom

symptom when the pain, in this disease, suddenly vanishes.

When the woman is likely to recover, either from the efforts of nature, or the assistance of art, it is generally indicated by a gradual diminution of the pain in the abdomen, and particularly by her having changed her posture, than which there can scarcely be a stronger evidence of the decrease of the inflammation. Another very favourable symptom is the return of the milk into the breasts, and of the lochial discharge; but it is also to be noted, that in some cases the latter never come on again, having been once suppressed, though the patient may recover. The pulse becomes less frequent and more free, and even apparently fuller, than in the violent stage of the disease.

The tongue is more moist, and gradually loses its whiteness, usually becoming clean first at the edges; the urine is voided in larger quantity; the skin is found moister and more cool. The respiration gradually is less laborious till it becomes natural. Towards the end of the complaint, whilst the other symptoms are subsiding, a considerable diarrhœa sometimes supervenes, and now and then carries off the disease.

This complaint, like the former, has not been known to be epidemic. But it is found much more frequently in the country; very rarely in large towns, and particularly in hospitals, indeed never but in the most robust, and plethoric habits, or after violent or instrumental delivery.

When the disease has produced any great degree of tumefaction of the belly, it is not very common for the patient to recover. Upon the whole it will be found a more fatal disease than that which was treated of in the former Essay, and for a very obvious reason.

The former attacks only one part, and that not engaged in any function necessary to life; whereas this, in its extent, affects a great variety of parts, the functions of some of which are indispensably necessary to the well-being, and even existence of the frame.

The appearances upon examining the bodies of women who have died of the disease, have been those of inflammation of the peritonæum covering the different viscera. Upon the whole, that of the neck of the uterus, and bladder will be found more generally inflamed than of other parts, nevertheless there is no part on which inflammation is not sometimes

sometimes found. The surface of the stomach, liver, spleen, omentum, great and small intestines, uterus, the internal peritonæal lining of the muscles of the abdomen, will, in their turns, or altogether be found to partake of the disease, and, as far as my experience leads me to judge, no part more than another. I think it particularly necessary to remark this, because different authors, who have treated of this disease, have laid great stress upon a supposed exclusive affection of particular parts, especially the omentum. I am satisfied, from a very extensive experience, that this is an error, and that the affection is general, at least not confined to any particular part. A very large quantity of a fluid generally is collected in the cavity of the abdomen, resembling serum mixed with pus; but it differs from both of them in this respect, that it is not homogeneous in its texture, but intermixed with portions of a solid matter, resembling pieces of the same solid matter, as is found on the surfaces of the peritonæum, the nature of which will be more particularly taken notice of hereafter.

I never, in any patient who died of this disease, found any marks of gangrene and
mortification

mortification of any of the viscera of the cavity of the abdomen.

Respecting the manner of treating this disease, I can point out no difference from that which has been recommended in the preceding Essay. But it is to be observed, that the remedies to be employed, will be found generally to be much less successful, particularly if they have not been employed very early in the disease. Where a great degree of tumefaction has taken place in the abdomen, especially if from the fluctuation it has been clearly ascertained to be from a fluid extravasated there, the patient will, I believe, very rarely recover.

Where it is possible, the use of bleeding both generally and topically are to be employed, and repeated according to the judgment of the attending practitioner, regulated by all the circumstances attending the disease; such as the constitution of the woman; the nature of the then prevailing epidemic, if there be any; her usual habits of life, whether she be in an hospital, in a large town, or in the country.

All these considerations should enter into
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our determination, and direct our conduct; and in this, as in most other cases of medicine, few general rules can be laid down, which must not frequently admit of exceptions. It very often happens immediately after the bleeding, that the pulse becomes more free, and the pain less. The blood drawn always has a very thick crust upon the surface of it.

I do not mean to add any thing farther on the manner of treating this disease, because it is the same with that already described in the former Essay; and I therefore beg to refer my readers to what I have there said upon the subject.

In the preceding account I have described the inflammation of the uterus, and of the peritonæum, distinct from each other, as they sometimes exist. Mixed cases, however, occur, where, from the same causes, both the substance of the uterus and the peritonæal surface of it, and the other viscera, become affected with inflammation. Under such circumstances there will be a combination, or complication, of the symptoms of both diseases.

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I considered it proper in the two former Sections to treat of the states of inflammation of the uterus and of the peritonæum separately as they are sometimes found. But it is right that I should observe here, that they are often mixed together, inasmuch, that the mixed case is that which we most commonly meet with; in which will be found a complication of the symptoms arising from the two different affections. This is a very dangerous state to the patient, and the degree of danger must be estimated by the violence of the symptoms described already, always remembering that it will be aggravated as the quantity of parts inflamed is greater.

Before I close this part of my subject, I must beg leave to caution those of my readers, whose experience may have been short, to be very careful in distinguishing these diseases from cases of fever consequent to labour, occurring in debilitated constitutions, in large towns, and in hospitals, more particularly when there is any disposition to epidemic complaints, which have a low tendency. Under all these circumstances we should be particularly cautious in the use of the lancet. Nothing but extreme necessity will justify it, and that necessity very rarely occurs.

SECTION IV.

ON CASES OF INFLAMMATION OF THE UTERUS, OVARIA, AND FALLOPIAN TUBES, OR OF THE PERITONÆUM, CONNECTED WITH INFLAMMATORY AFFECTION OF THE SYSTEM.

CASES of inflammatory fever have been described by authors as occurring sometimes in puerperal women; and it has been conceived that this fever takes place first, and that an inflammatory affection of the abdomen comes on afterwards.

This idea has taken its rise from a rigor, in many cases being one of the first apparent symptoms of disease in some patients. When this happens, especially when it is violent in its degree, as it is a proof of the system sympathizing with the local affection very early in the disease, the patient generally is in greater danger than where there had been no such preceding rigor, or where it had been slight. Perhaps the extent of the local disease may be the reason why the constitution is so soon affected

affected in some cases. Whether the fever, however, takes place first, (if it be of the inflammatory kind) and the inflammation succeeds it, or the inflammation precedes, and the inflammatory affection of the system be only a consequence of it, the state of the patient will be nearly the same.

When, however, the disease at its outset is attended with this rigor, it is for the most part accompanied throughout (if in a robust plethoric habit) with considerable marks of the whole frame being acted upon. The eyes are apt to become bloodshot, a throbbing pain is often felt in the head, attended with a noise in the ears; the face becomes red, and the eyes appear wild and prominent. The heat over the whole body becomes greater. Sometimes the patient bursts out into a profuse sweat, especially about the head, which nevertheless does not mitigate the symptoms. Rambling of the mind succeeds, and to this a delirium of the violent kind, in which the patient sometimes dies. At others, if the local disease do not destroy her, the delirium terminates in mania, but this is a rare occurrence.

All these symptoms strongly indicate not
 3 only

only the presence of a local complaint, but also of an increased action of the heart and arteries throughout the whole of the body. Now although at the time there seems to be a greater exertion, it is to be remembered, that there will be a much greater waste of absolute strength than when there is only a disease accompanied with an increased action of a part of the body, just in the proportion as the whole is greater than such part.

This will make a difference in the treatment which ought to be pursued. When only a part of the body is attacked by inflammation, and when this is unattended with any great affection of the system, it will be right to attempt immediately to reduce the disease, by bleeding largely from the system, and repeating it at short intervals; and no disadvantage will arise from such conduct, because as the whole frame is not disordered, when, by such a plan, we have cured the local malady, the patient is well; but if on a false idea of the necessity of pursuing the same treatment in this case, we should reduce the patient beyond a certain point, the increased action will indeed continue; but in a body whose powers being exhausted, is incapable
of

of supporting it, the patient will, in consequence, fall into a state of extreme irritation, and a fatal termination of the disorder will be thereby ensured.

Here then, although blood must be taken away early in the disease, the quantity should be smaller, seldom more than eight or ten ounces; and unless this should seem (from the diminution of some of the symptoms) to have given considerable relief, it should be with great caution repeated; or if it be, it will be better to take it away from small, than from large vessels; and that by leeches, or by scarification and cupping. By this means the patient will be less weakened, whilst the bleeding will be equally efficacious. Opium too must be employed with more caution, because it is very liable to increase any disposition which there may be to delirium. Where there is such a disposition, it will be found advantageous to apply cataplasms to the legs and feet, which, I believe, are better than blisters, because they do not irritate the constitution so much as the use of cantharides.

Shaving the head and applying volatile alkali on the outside of it, will sometimes afford

ford relief, and in cases of great urgency should never be neglected.

The treatment in other respects resembles that which has been already recommended in the second section of this Essay, therefore need not be repeated in this place.

This is a form of disease which frequently appears in the country, and is much more generally met with than either of the states described in the two former parts of this Essay. It sometimes also occurs in large towns, but much more seldom, because there the constitution is more apt to be affected with symptoms of irritation, than of general inflammation. None of the three preceding diseased states appears to be at any time epidemic, or even endemic, unless that on the whole they will be met with more frequently in constitutions, and under circumstances, favourable to inflammatory complaints, rather than in those of an opposite tendency.

But none of them, as far as I am warranted by experience in judging, is in any degree infectious under any circumstances.

SECTION V.

ON THE AFFECTION OF THE UTERUS, AND
OF THE SYSTEM ARISING FROM PORTIONS
OF THE PLACENTA LEFT IN THE UTE-
RUS.

THERE is another and different affection of the uterus from that which I have described above, and which produces different effects upon the constitution.

In a former part of these Essays I have taken occasion to point out the importance of so conducting a labour that the placenta shall be expelled altogether, and by the powers of nature. It sometimes however will happen, notwithstanding all the care which can be taken, that there will be a necessity (though it occurs but seldom) for bringing it away by art, on account of its unnatural retention, or by reason of a flooding. When such a necessity exists, it has happened that practitioners from timidity, and an idea that it could do no mischief, have left parts of the placenta adhering to the uterus, if they have found
any

any difficulty in separating the whole. This I know may often be done with impunity, and the portions left will come away; but I beg to observe, that I have known some fatal cases arising from this practice, and from this circumstance I am of opinion, that whensoever the hand is introduced to detach the placenta, the whole ought to be brought away if possible, even though it should be with some little difficulty: as, if care be taken, no harm can arise to the uterus from doing it.

For the first three or four days the woman seems to suffer no inconvenience from that which remains, except that there is rather a larger discharge of the lochia than there ought to be.

The next visible alteration is, that the discharges become of a bad colour, very large in quantity, and abominably offensive to the smell.

The patient now begins to complain of pain in the back, and in the region of the uterus; the pulse will be found exceedingly frequent, quick, contracted, and of a wiry hardness.

The countenance assumes a pale and fallow cast, and the woman loses flesh daily. The eyes become glassy, and the inner can-

thus of the lids becomes pale, as do also the tongue and lips. The palms of the hands and soles of the feet burn with heat.

To these symptoms sickness and vomiting succeed, and these are followed by a constant yawning first, and then hiccoughing. In this way the patient goes on for a few days, till at last she can keep nothing on her stomach; the extremities then become cold, and clammy, and at length, in a fortnight or three weeks after delivery, she is cut off by these symptoms of irritation.

If it be known that any part of the placenta remains behind, it may sometimes be picked away, at least partially, in a putrid state. But if this cannot be done, then we must endeavour to prevent the constitution from being affected by its retention, or remove the ill effects which have already taken place.

An injection of the decoction of bark into the vagina, (and uterus, if it be possible) will be found useful, if it be only by washing away any matters which may be there. Internally bark, wine, and other cordials, should be given in as large quantities as the stomach will bear. If, however, vomiting has already come on, then the effervescent saline draughts

draughts given every hour, with opium, should be first given; and when the stomach is quieted, then bark and wine may be exhibited.

Both medicine and food should be employed in very small quantities, and often repeated; because if too much be introduced into the stomach at one time, it will certainly be rejected, and we shall have done more harm than good. The food should be simple at the same time that it ought to be nutritious. Broths, bread, and milk, sago-milk, or any similar food, may be given.

This plan will allay the irritation, and support the strength, till the whole of the putrid matters are discharged, and then the patient may recover.

But if the complaint have been long neglected, no remedies will avail to avert the death of the woman.

SECTION VI.

ON THE LOW FEVER OF CHILD-BED, CONNECTED WITH AFFECTION OF THE ABDOMEN, WHICH IS SOMETIMES EPIDEMIC.

WHEN we reflect upon the nature of child-bearing; when we consider the comparative size of the child's head to the pelvis; the violent exertions employed to expel it; the great agitation which these occasion in the system; and the acuteness of the pain which attends upon the whole process, we must of course admire the preserving care of a good Providence in protecting women against those injuries, which we should expect must inevitably be produced thereby.

In a former part of this work I have taken occasion to observe by what means the Author of nature has contrived to counteract all these mischiefs, so that very rarely women fall victims to this laborious process. The infrequency of death in child-bed, has induced mankind at large to assume it as a fact, that a man who loses many patients must be a bad practitioner. This, to a certain extent, may

may be considered as true, because, most probably, no person can uniformly be unsuccessful in midwifery, and for a great length of time, without some kind of misconduct. Yet, nevertheless, there have been seasons and situations when the mortality of puerperal women has been more particularly alarming, and where it would appear that human prudence could not foresee or avert, nor human skill relieve, one of the most fatal diseases to which our nature is subject.

One of the first accounts which we have of any epidemic in lying-in women, may be found in the *Memoires de l'Academie Royale des Sciences*, for the year 1746, which, as it is very correct and very analogous to what has fallen under my own observation, I shall take the liberty of transcribing, to save my readers the trouble of referring to the work in which it is contained.

“ Il a régné pendant l'hiver de 1746, une maladie epidemique parmi les femmes en couche : M. de Jussieu a le premier observe cette maladie, elle commençoit par le devoiement ou par un disposition au devoiement qui continuoit pendant la couche : les eaux qui accompagnent ordinairement la nais-

sance de l'enfant, fortoient pendant le travail de l'accouchement ; mais après ce temps la matrice devenoit sèche, dure & douloureuse, elle étoit enflée & les vuidanges n'avoient pas leur cours ordinaire.

Ensuite, ces femmes étoient prises de douleurs dans les entrailles, sur-tout dans les parties qu' occupent les ligamens larges de la matrice ; le ventre étoit tendu, & tous ces accidens étoient accompagnés d'une douleur de tête & quelque fois de la toux.

Le troisième & le quatrième jour après l'accouchement les mammelles se flétrissoient, au lieu qu'elles durcissent & se gonflent naturellement dans ce temps par le lait qui s'y filtre alors en plus grande quantité : enfin ces femmes mouroient entre le cinquième & le septième jour de l'accouchement. Cette maladie n'a attaque que les pauvres femmes, & elle n'a pas été aussi violente, ni aussi commune parmi les pauvres femmes que ont accouché chez elles que parmi celles qui ont été accouchées a l'Hôtel-Dieu ; on a remarqué que dans le mois de Fevrier de vingt de ces femmes malades en couche a l'Hôtel-Dieu, a peine en échappoit-il une ; cette maladie n'a pas été si meurtrière dans le reste de l'hiver.

Messieurs Col de Villars & Fontaine, Médecins de cet Hôpital nous ont rapporté qu'à l'ouverture des cadavres de ces femmes, ils avoient vû du lait caillé, & attaché a la surface externe des intestins ; & qu'il y avoit une sérosité laiteuse épanchée dans le bas ventre ; ils ont même trouvé aussi de cette sérosité dans le poitrine de quelques unes & lorsqu'on en coupoit les poumons, ils dégorgoient une lympe laiteuse & pourrie.

L'estomac les intestins & la matrice bien examinés, paroissoient avoir été enflammées & il est sorti des grumeaux de sang, a l'ouverture des canaux de la matrice.

Dans plusieurs de ces femmes les ovaires paroissoient avoir été en suppuration."

In the Medical Commentaries, published by Dr. Duncan of Edinburgh, for the year 1790, are contained some observations by Dr. Joseph Clarke of Dublin, on the periods at which epidemics have occurred among lying-in women, since they have been taken notice of at all, and from which I shall take the liberty of making some extracts, chiefly as to the time when they have prevailed.

“ In the year 1760, (which is about eleven
“ years after the first institution of Lying-in
“ Hospitals

“ Hospitals in England), the puerperal fever
 “ was epidemical in London. From the
 “ 12th of June till the end of December,
 “ Dr. Leake informs us*, that twenty-four
 “ women died of it in the British Lying-in
 “ Hospital.

“ In the year 1761, Mr. White of Man-
 “ chester says †, A gentleman, whose ve-
 “ racity I can depend on, informs me, that
 “ he attended a small private lying-in hospital
 “ in London, in the latter end of May, June,
 “ and beginning of July; during which time
 “ the puerperal fever was very fatal there.
 “ That, to the best of his recollection, they
 “ lost twenty patients in the month of June.
 “ They sometimes buried two women in one
 “ coffin, to conceal their bad success.

“ In the year 1770, this fever raged vio-
 “ lently in several of the London hospitals.
 “ In the Westminster hospital ‡, between
 “ November 1769 and May 1770, of sixty-
 “ three women delivered, nineteen had the

* Practical Observations on Child-bed Fever, last page.

† Treatise on the Management of Lying-in Women,
 &c. Chap. VI. Page 165.

‡ Leake's Practical Observations, Page 241.

“ fever, and fourteen died ; which is nearly
“ every fourth woman,

“ In the British Hospital, of eight hundred
“ and ninety delivered in the course of this
“ year, thirty-five died, or one in fourteen
“ and a half.

“ In a third hospital, which Mr. White
“ has not thought proper to name *, during
“ the year 1771, of two hundred and eighty-
“ two delivered, ten died, or one in twenty-
“ eight.

“ In the year 1773, the puerperal fever
“ appeared in the lying-in ward of the Royal
“ Infirmary of Edinburgh, of which the
“ late Professor Young gives the following
“ account: It began about the end of Fe-
“ bruary, when almost every woman, as
“ soon as she was delivered, or perhaps about
“ twenty-four hours after, was seized with
“ it ; and all of them died, though every
“ method was used to cure the disorder.
“ This disease did not exist in the town. I
“ found that the women in the lying-in
“ ward did not recover so well last year as
“ formerly ; but scarcely any died. It was

* Postscript to Mr. White's Treatise, Page 305.

“ this made me think there was a local infection, and determined me to shut up the ward till it could be removed. This I did, after losing six women.

“ In the year 1782, the Royal Medical Society of Paris was ordered, by the King of France, to make a report of a Memoir of the late Dr. Doulcet, containing a new method of treating the puerperal fever. This very respectable society informs the public, that puerperal fever has made its appearance more frequently than ever in the Hotel Dieu of Paris since the year 1774; and that it had always proved fatal to every person it attacked. They further report, that, in four months, during which this epidemic disease raged with great fury, near two hundred women were saved to society by Doulcet’s new method of treatment; of the success of which, in this country, we shall give some account in the sequel*.

“ In the year 1786, a report was pub-

* I am informed by my friend Dr. Osborn, that in the year 1783, the disease appeared in the Lying-in Hospital in Store-Street, and that in four months ten women died of the disease.

“ lished in Paris, by a Committee appointed
“ by the Royal Academy of Sciences, to en-
“ quire into a plan of a new Hotel Dieu.
“ In this report, it is stated, that, in the
“ year 1774, an epidemic disease prevailed
“ among the lying-in women, which com-
“ mitted the greatest ravages; that it re-
“ appeared every winter till the year 1781;
“ and that, still it prevails more or less in
“ the cold seasons. These facts are taken
“ from Memoirs communicated to this Com-
“ mittee by Mr. Tenon; by which it also
“ appears, that all women, seized with this
“ epidemic, die; and that, of twelve, seven
“ are frequently attacked. Their conclusion
“ is, L’Hotel Dieu donc perd quelquefois
“ plus de la moitié des femmes qui y vont
“ accoucher.

“ The puerperal fever first visited the
“ Lying-in Hospital of Dublin in the year
“ 1767, about ten years after it was first
“ opened for the reception of patients. From
“ the first of December till the end of May,
“ of three hundred and sixty women deli-
“ vered, sixteen died.

“ Seven years afterwards, this fever re-
“ appeared. Of two hundred and eighty
“ women

“ women delivered during the months of
 “ March, April, and May, in the year 1774,
 “ thirteen died.

“ From the year 1774 till the year 1787,
 “ this fever was unknown as an epidemic in
 “ Dublin. From the 17th of March, in
 “ this year, till the 17th of April, one hun-
 “ dred and twenty-eight were delivered in
 “ the hospital; eleven of whom were seized
 “ with symptoms of puerperal fever, and
 “ seven died.

“ In November 1788, the same fever ap-
 “ peared, for the fourth time, since the in-
 “ stitution of the hospital. During this, and
 “ the two succeeding months, three hun-
 “ dred and fifty-five women were delivered;
 “ seventeen were attacked by this fever, and
 “ fourteen died.”

In the year 1787 and 1788, the same year in which the disease seems to have been prevalent in Dublin, it was also exceedingly general through the whole of this country, but more especially in London, and in hospitals; and made wonderful havoc among lying-in patients, which gave occasion to great alarm in the minds of women, and of persons engaged in that department of medicine. From
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the number of deaths among people of rank in that state, some kind of estimate may be formed of the ravages, which it must have committed among those of whom less care was taken, and who had fewer of the comforts and conveniences of life.

Finding that those medical men, whose age and experience were great in the diseases of puerperal women, were staggered at the fatality, and embarrassed and perplexed in the treatment of the disease, I thought that I should perform a duty not unacceptable to the profession, by delineating the prominent features of it, so that at least it might be known; and by describing what means had been employed without effect, in order that others might be tried, in the hope of succeeding better.

My observations were, at that time, very hastily thrown together, and published on the spur of the occasion; but I am much flattered by finding, that the short account written by Dr. Joseph Clarke, of the same epidemic, (though it appears from his not quoting it in his history of Epidemics, that he had never seen my Essay, which had been published two years before) corresponds so nearly in most points with my own. This

may be considered as a strong proof that the nature of the epidemic, and its fatality, here and there, were the same.

The contents of this Section will consist of some of the materials of my former Essay, together with such additional observations as have occurred to me since the time when that was published.

Towards the middle of the year 1787, a disease made its appearance among parturient women in London, which proved fatal to a great number of patients.

In many of its symptoms, and through its whole course, it seems to differ materially from any disease which has been described by authors as attacking women in a parturient state; and notwithstanding that in some respects it is analogous to the diseases described in the former Sections of this Essay; yet still there is so material a difference in the nature of its attack, in its general progress, and in the manner of its termination, that I think an essential difference will be found to exist between them.

Instead therefore of endeavouring to rank the disease under any particular class, described by nosologists, I shall rather confine myself to the result of my own observations
and

and such hints as I have received from others, who have seen patients labouring under it; and shall not trouble my readers with more reasoning on the subject than is necessary, being well satisfied that more advantage is likely to accrue to society generally, and especially to the cultivation of medicine, from a faithful, impartial, and unprejudiced relation of facts, than from any speculative opinions, biassed perhaps by attachment to some system.

It has been usual before the description of any epidemic complaint to relate the previous state of the air, as it has been found to affect the thermometer, or barometer: from this kind of observations, however, little light has been hitherto thrown upon the cause, or nature of epidemics.

There cannot be much reason to doubt that climate, or (which is very analogous to it) a long succession of seasons in any climate, has certain effects upon human bodies. Such varieties as depend upon heat, cold, moisture, or dryness, being very obvious alterations, or differences in the state of the atmosphere, the effects of such varieties may be readily seen and observed; but the peculiar properties of these states of air, which subject the body to

the influence of disease may be, and most probably are, infinitely too subtile for our investigation, and incapable of being detected by those means, which lead us to judge either of the heat, or weight of the atmosphere *.

For these reasons I shall avoid entering into a very minute and particular account of the constitution of the air. Nevertheless it may not be superfluous barely to observe that the two winters of 1785-6 and 1786-7, although there was in both some frost, yet in neither was the cold weather of long duration; on the contrary they were upon the whole mild, with frequent rains; neither were the two preceding summers very hot, but in both

* *Profecto quicquid nobis de hac omni quæstione scire, conceditur, angusta admodum metitur circumscriptio, & laboribus quibuscunque frustra exantlatis, fateamur tandem necesse est cum optimo Sydenhamo.—“ Quæ qualisque sit
“ illa aeris dispositio, nos pariter, ac complura alia, circa
“ quæ vecors, ac arrogans philosophantium turba nugatur,
“ plane ignoramus.”* Neque sane virum philosophum dedecet nescire ea fateri quæ nesciat, adhibita modo prius ad res rite perpendendas diligentia: at incognita pro cognitio habere, eaque incertissima quæ sint, pro certis vendicare, id vero dedecet.

Sir George Baker's *Opuscula Medica*,
Octavo, Lond. 1771.

there

there was more rain than is customary in this climate at those seasons. The connexion which there is between certain seasons and the actions of an animal body, though the mode of their action is very imperfectly, if at all understood, yet is sufficiently established to be admitted as a fact in medicine. Perhaps to some peculiarity in the succession of seasons mentioned above, we are to attribute the sort of diseases which had been lately prevalent, before the appearance of the epidemic. Inflammatory diseases had been extremely infrequent; or, if they occurred at all, they were principally of the erysipelatous kind. Eruptive diseases, particularly those which are attended with great depression of strength, had attacked great numbers of patients. The ulcerous sore throat, with or without the scarlatina, had been very general both in London, and also in the country at a distance from the capital. Most of the fevers had been of the low, nervous, and malignant kind, approaching to that type which has been by some called putrid, and had swept off a very large number of people of both sexes, but especially children and those of more delicate constitutions.

About the same period also, in some situations in the country, especially in low and marshy places, the generality of patients under inoculation had recovered with great difficulty. Abscesses formed in the axilla; large ulcers and floughs took place, both there and at the place of insertion of the matter, and the number of patients who died, far exceeded any former proportion, even in the same situation.

Dr. Joseph Clarke has given some account of the state of the air, and prevailing diseases in Ireland about the same time, but his observations are confined to the spring of the same year in which the disease made its appearance; and he says, that “ the temperature of the air was in general very cold, “ with sharp winds from the east and north-east, and that inflammatory diseases were “ more prevalent among our patients than “ usual, particularly acute rheumatism. Some “ were affected with severe pains in the “ thorax, and difficult respiration. In consequence of these complaints, we were “ obliged to have recourse to venesection “ more frequently during February and “ March

“ March of this year, than during the twelve
“ preceding months.”

This I find it difficult to reconcile with that which directly follows: “ Our patients
“ recovered slowly; or, to use the language
“ of the nurses, it was much more difficult
“ to get them out of bed than usual.” In another place Dr. Joseph Clarke writes,
“ Most of our patients attacked in the year
“ 1787, were admitted in a weakly state, or
“ had tedious and fatiguing labours.—As a
“ considerable time had elapsed since our
“ wards had been painted and whitewashed,
“ I thought it probable that these circum-
“ stances might contribute to the slow reco-
“ very of our patients.”—As Dr. Joseph Clarke has not mentioned the state of the atmosphere for any considerable length of time before the approach of the complaint, I am apt to think that the general effect of continued seasons had been there, as it was here, to debilitate the constitution, and increase the irritability, especially as he informs us that most of the patients attacked were admitted in a weakly state. If that were the case, we can hardly expect that the effects, which

might have arisen in the spring, from cold winds, could have much power in subverting a predisposition to disease, the foundation of which had been laid by a long succession of seasons. And indeed this appears to have been the case; because although the sharp winds for the time seem to have so far counteracted the previous disposition for low diseases that pneumonic complaints had been the consequence of them, yet still the predisposition continued to exert itself, as we find proved by the “general weakly state of his patients.”

It is a curious circumstance, that before the attack of the epidemic of lying-in women at Paris in the year 1746, in the month of January there had been an epidemic low fever, with an ulcerous sore throat. But in February, cold north-east winds, which had brought on pleurifies and acute rheumatism, had not overcome the predisposition to low diseases, as was proved by the puerperal epidemic coming on afterwards; from the account of which, published in the *Mem. de l'Acad.* it is evident, that the complaint was of a low kind.

Having written thus much on the seasons
and

and the nature of the diseases, which had been prevalent in the period of this constitution of the air, I shall now proceed to describe the disease under our consideration.— In this description I shall avoid the recital of every individual case, which would only confuse and tire the patience of my readers; instead of which I shall, in as clear a manner as I am able, collect the result of the whole, and enumerate the symptoms which characterize the disease, taking notice occasionally of any varieties which occurred in particular patients.

The first case which I met with was in the month of July of the year 1787, in which I was astonished to observe the rapidity with which it ran its course, and the very extraordinary manner in which the woman was destroyed by it. Since that time I have had an opportunity of seeing a great number of cases of the disease, by which means I have, at least, acquired a more perfect knowledge of the symptoms which attend it.

In the early cases the short duration of the whole complaint hardly gave me time to discover the real nature of it; but by an attentive observation of those which I have since seen,

whilst the patients were alive, and by the examination of the bodies of many of those who died, I hope that I have derived some practical information, and a better knowledge of the disorder.

The most common time of the attack has been on the second or third day after delivery : but in some instances the patient has never recovered from the fatigue of her labor, and in others, though very seldom, she has been seized so late as the eighth day.—In cases where patients have been attacked immediately after delivery, it would seem probable that either the predisposition must have been very strong, or that they must have been actually exposed to the infection of fever before delivery. This last supposition may, perhaps, account for the introduction of the disease into hospitals.

It has hardly occurred to me to see a case in which the disease began with a shivering fit, which is common in the commencement of many other fevers, and in the cases where the constitution sympathizes with local inflammations which have been already treated of. If there was any degree of rigor, it has been so slight as to have escaped the attention
of

of the patient, and the observation of her attendants. Indeed so great a diminution of the general sensibility and irritability accompany the whole complaint, that even if a slight rigor should take place the patient might not observe it, or being sensible of it, at the time might not afterwards remember it.

A symptom which I have noticed in many of the women, who have been afflicted with the complaint, has been a refusal to suckle, and a carelessness respecting their children. At first I did not consider this as any part of the disease, and even thought it probable that it might not; but as it has occurred so frequently, I am inclined to set it down in the catalogue of symptoms, believing it to make a part of the disease *.

There cannot be any doubt that nature intended that all women should give suck to

* A circumstance of which I have been lately informed by Dr. Garthshore, seems farther to prove that this may be esteemed a symptom of disease. A favourite animal, in his house, immediately after whelping, became violently ill. Dr. G. was desired by one of his servants to see her, when, upon enquiring for the puppies, he was told that the animal had lost her milk, and that she had pushed them away, refusing to suckle them. At this time the extreme parts were becoming cold, and she died the next morning,
their

their own children. The custom of employing hireling nurses has been introduced by luxury, and is certainly unnatural. Particular situations of life, however, as has been before observed, render the office of suckling inconvenient to some, and a regard to the preservation of character impossible to others. If the dislike to suckling had only been observed in patients of these descriptions, it would not have engaged my attention so much ; but it has occurred under all circumstances, and in women of strong affections, so as to make it extremely probable, that it is a symptom of the disease.

Whence it arises, or upon what it depends, it may be very difficult to ascertain : whether it may be that the properties of the milk may be so far changed as to make it unfit for the nourishment of the child, or whether we ought not rather to consider it as a proof of a slight degree of affection of the brain in the beginning of the complaint, it would be not easy to determine. With regard to the former, I have not from observation been able to detect any alteration in the apparent properties of the fluid ; but the quantity of it is certainly in most cases diminished. In some cases

cases little or none ever is secreted in the breasts, and they never become tumid, especially where the accession of the disorder is early after delivery: in others, where the disease has begun after the secretion of milk has taken place, the milk soon disappears, and the breasts become soft and flaccid. It is probable that the secretion of the milk in the gland, and the desire of suckling may be in some way connected with each other, and the existence of the desire may depend upon the presence of the secretion in like manner, as the power of secretion in the testicles produces the passion for propagation; and the passion in its turn affects the disposition for secretion. This is rendered farther probable by this consideration, that women when in health consider suckling their children as a pleasure, independently of its being a duty.

Generally at the very outset of this disease the countenance has a particular appearance, long before we can conceive the absolute strength of the patient to be exhausted: the visage becomes pale and rather ghastly, and there is the appearance of a general relaxation of all the muscles of the face: the lips and the angles of the eyes lose their florid red colour,

lour, the cheeks and the rest of the face acquire a cadaverous hue, and there is that general cast of features which is so well known in patients who have been worn out by some long disease: a clammy dew, or moisture commonly appears upon the face, not amounting to sweating: the pupil of the eyes is usually much dilated, but contracts upon exposure to a strong light: the eyes themselves, in a very short time, lose their lustre and quickness, and acquire a glassy appearance; they seem vacant, and are inattentively turned towards any object, and even then are not long confined to it, but in a little while wander to some other.

In the course of this complaint the tongue undergoes many changes, nor is the appearance of it by any means uniform in all cases. Most frequently in the beginning it is quite pale, but not dry, and this state of it often continues through the whole progress; but it is more common for it to become dry afterwards and white, and in some instances very rough. When the disease is in a more malignant form, and has lasted for some days, it almost constantly becomes brown: whenever this happens the surface of the teeth will
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for the most part be found to be incrusted with a fur of the same colour.

In some instances apthæ will appear over the whole internal surface of the mouth and tongue, the hard and soft palate, the uvula, tonsils, and pharynx, so that they will all become perfectly white and much swelled. The irritation from this cause produces a constant disposition to cough, which is also partly occasioned by the secretion of a thick mucus about the pharynx, which choaks up the trachea, keeping up a perpetual difficulty of breathing. In some instances, similar apthous appearances will be found about the anus. This has given occasion to a very general opinion, that the apthæ go through the whole track of the intestinal canal. Dissection, however, has not given sanction to this idea, and I am disposed to think that it is not so, because I have never seen any thing like apthæ discharged by stool. The irritation also about the pharynx sometimes brings on sickness. The apthæ usually continue for a long time, particularly about the uvula and tonsils.

The skin of the rest of the body, like that of the face, is not hard or tense, but frequently appears to the feeling more relaxed than

than it is found even in a natural state; and is sometimes covered with the same sort of clamminess which has been mentioned as observable on the face.

The heat of the patient is seldom increased, either to her own sensation, or that of her attendants: even in those cases where it has appeared to be rather greater to the feelings of others, it has not been complained of, or expressed by the patient herself. Thirst, which is very common in fevers, and in the affections described in the former Essays, is generally little complained of in this disease.

The action of the heart and arteries is affected at a very early period of the disorder, inasmuch that the frequency of the pulse is often the first symptom which is observable in the complaint. In some patients, who before the attack of the disease were strong and plethoric, the pulse will be found for a few hours apparently more strong than before, but in a short time it will become weak.

In most of the cases which have fallen under my observation, the frequency of the action of the heart and arteries has been increased in a surprising degree, the number of pulsations in a minute being commonly from

110 to 130, in the very beginning of the disease. In the course of it, it will become more and more frequent, irregular, intermitting, weak, and tremulous, till the pulsation can hardly be numbered or perceived.

In some cases purple spots have appeared before death as in petechial fevers, probably depending either on great weakness of the vessels, which allow the fluids to escape into the cellular membrane, or upon some alteration in the state of the fluids themselves, by reason of which they are not so easily retained; or partly on the one and partly on the other.

From the circumstance alone of the great frequency of the pulse without any apparent reason, I have been often able to detect the attack, when the woman herself has made little or no complaint. Here I cannot refrain from observing that it is very uncommon to find a pulse beating to the number of 110, or upwards, after a reasonable time allowed for refreshment and recruit from the fatigue of labour, without strong reason for suspecting that there is some latent disposition to disease, even though none should appear. It will at least be a sufficient reason to the medical

dical attendant to be upon his guard and narrowly to watch, so that he may detect the insidious and treacherous encroachments of a disease, which when once it has fairly fastened upon the constitution, seldom loses its hold till it has effected the destruction of the unhappy patient.

The cavity of the abdomen very largely participates of disease : sometimes it is affected at the beginning, in other cases not till a more advanced period. A general swelling of the belly comes on, at first hardly perceptible by the patient. This is soon followed by a sense of pain upon the slightest motion, in consequence of the compression made upon the parts by the muscles, which pass over the cavity, during their state of contraction. The swelling having once begun increases very rapidly, insomuch that the belly will become as large as it had been before delivery. The pain, however, is not proportioned to the quantity of swelling. I have even seen some cases, where, although the tumour has been very considerable, the pain has been but slight. This I have commonly accounted for on the idea of a diminished sensibility making a part of the disease, especially as it has occurred

most in those cases where the prostration of the muscular strength has been most manifest early in the disease, and where the pupil of the eyes has been most dilated. In such cases, where there has been little complaint of pain, at the same time that there has been great distention of the cavity of the abdomen, their termination has usually been very unfavourable. When the swelling is in a great degree, the breathing becomes prodigiously affected; the respiration becoming short and laborious. This is occasioned partly by the diaphragm encroaching upon the chest, in consequence of the distention of the abdomen, and partly in some instances from an organic affection of the chest itself, similar to that which has been already described.

The functions of the *primæ viæ* are generally much disturbed in this disease. In the beginning they often go on very well; but in the progress purging most commonly, and often in an excessive degree, comes on, especially in those cases where the abdomen has been most distended, in some of which the *fæces* have even been discharged without the consciousness of the patient. The evacuations from the intestines in this complaint

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are generally of a bad colour, and very offensive to the smell.

The state of the urine I cannot describe, as it is commonly mixed with some portion of the uterine discharges. This, as well as the fæces, is also frequently passed involuntarily, more particularly in the last stages of the disease. The uterine discharges usually are suppressed, or diminished in quantity. When they are not, they generally acquire a very offensive and putrid smell.

Vomiting not unfrequently attacks the woman about the same time, and sometimes to such a degree, that scarcely any kind, or the smallest quantity of food, or medicine, will remain upon the stomach. The matters vomited are generally of a porraceous colour, sometimes nearly black, and have often a very disagreeable smell.

The purging has in most cases appeared on the third or fourth day of the disease, but in some instances later.

The brain and nerves seem to have a considerable share in the disease. The energy both of the one and the other is manifestly diminished. Hence in an early stage we find the muscular powers very much depressed,
and

and in the more advanced stages, the sensibility, with regard to stimuli, evidently impaired. To this last circumstance we ought perhaps to attribute it, that persons who labour under this disease make so few complaints, often scarcely any, inasmuch that practitioners, little conversant with it, would be surprised to observe how soon they will be cut off, having complained hardly at all. Early after the attack, if they are asked respecting their sensations, their common answer is that they are very well; or if they make any kind of complaint it is only that they are low, and this state of apathy (if I may be allowed the expression) seems to continue through almost the whole course of it. As an instance of this I saw one patient, who on the seventh day of the disease, at two o'clock in the afternoon, begged that she might be allowed to rise out of bed, (which however was not permitted) alledging that she was nearly well, and she died at three the next morning. I have known the swelling of the abdomen enormous in degree, and yet the patient has scarcely uttered any complaint, unless when it was firmly pressed.

Violent delirium very seldom appears in

this complaint, but the patient more commonly falls into a low, stupid, or comatose state, wishing not to be disturbed; yet, if roused, she will to the last moments give tolerably clear and rational answers to any questions which may be made to her *.

There is another symptom which sometimes comes on early in the disease, and continues through the whole course of it, which is a constant noise (which patients call a singing) in the ears.

Perhaps there is scarcely any disease, which we are acquainted with, whose consequences are more fatal than this; as far as I have observed, three-fourths of those who have been seized with it have fallen sacrifices to its severity. In private practice, however, patients have a much better chance than in hospitals.

The danger seems to be greater in proportion as the accession is sooner after labor.

Those who have had the disease, at a later period, have not been attacked with the same

* Dr. Joseph Clarke, in his account already referred to, conformably to what I had before remarked, but which it appears that he had never read, says, "Such insensibility we always considered in an unfavourable light, as marking great derangement in the functions of the nervous system."

violence;

violence; the depression of strength has been less considerable, the tumefaction of the abdomen less extensive, and their chance of recovery has been consequently better.

It has not occurred in my sphere of observation to see any recover in whom the swelling of the belly has been in any very great degree. Indeed it is hardly possible, when we consider the great injury which all the contents of it must suffer from the effusion of extraneous matter poured into the cavity, as will be hereafter described.

The increase of danger is marked by the increasing frequency of the pulse, by its increasing weakness, and by the irregularity of it, which frequently comes on before death. The increasing size of the abdomen is also another very dangerous symptom.

It is also worthy of remark, that those patients are always in the greatest danger who make the fewest complaints in the course of the disease; especially if at the same time the pulse be very frequent, and the swelling of the belly considerable. Whether this circumstance arises from some degree of delirium, or that the sensibility is so impaired that the distention, (which in other cases, as in

inflammation of the uterus, or peritonæum already described, is attended with great pain) conveys no impresson to the mind, I cannot absolutely determine, but I lean to the latter opinion, from having often heard these very patients answer all questions made to them very sensibly and rationally. And I am the more inclined to it from its general correspondence with the character of the disease, in which nothing is more apparent than the diminution of sensibility.

The rapidity with which this disease sometimes runs through its whole course is most alarming. I have seen a patient destroyed in thirty-six hours from the first attack, apparently by the mere depression of strength. Many have died on the third day; some however have lingered on in a state of stupid existence for eight days, or more, and then have sunk and died.

I have never known the act of dying attended with much struggling or pain, except in those cases in which the tumefaction of the abdomen has made respiration very difficult and laborious.

The extremities before death generally become cold; the pulse beats weakly and irregularly;

gularly ; the whole body is covered with a clammy moisture ; the patient appears careless and indifferent to all external objects, and then dies often without a groan.

The extraordinary and rapid destruction in this disease led me, at the time when it was last epidemic in London, to inquire whether the dissection of such as died in it would throw any new light upon the subject, or point out any rational or probable method of cure. The opportunities therefore which have occurred to me of investigating the appearances in the dead body, have not been neglected. I have opened a great number in all stages of the complaint, and as appearances are often altered at some distance of time after the patient has died, I have examined some at very short periods afterwards, in order that if there was any difference, it might be detected.

The first thing which in the greater number of cases presents itself is a collection of fluid in the general cavity of the abdomen, sometimes very large in quantity, inasmuch that I have often absorbed, by means of a sponge, several quarts of it. It is of the same nature with that which I have described in a former Section, as far as can be ascertained

by its sensible qualities. There is something very remarkable in the smell of this fluid, which is peculiar to itself, and distinguishes it from any other fluid which I have ever met with in the human body, either in health or disease. Where it is in large quantity, all the surfaces of all the viscera and of the peritonæum generally will be found covered with a crust formed of a solid part of this matter, resembling coagulating lymph. Its particles cohere but slightly, so that by a little agitation it will mix with the fluid matter. The parts however lying under this coat or crust are not always inflamed. If there be any interstices between the intestines, or the other viscera of the cavity of the abdomen, they are frequently filled with large masses of the same, making an accurate cast of such interstice. The quantity of fluid extravasated, and of the solid part floating in it, or incrusted, is prodigious sometimes, when the disease has been of short standing, not exceeding two or three days. They seem also, as far as I am able to judge, to bear no proportion to the degree of inflammation, or the extent of inflamed surface, since we often find a large quantity of both, where the redness of
any

any surface has been very inconsiderable, and by no means general. In most instances there has been some slight degree of inflammation in some part of the cavity of the abdomen; but it has not been confined invariably to any particular part. Sometimes the peritoneal surface of the intestines, sometimes of the stomach, sometimes of the liver, and sometimes the investing membrane lining the muscles, have been found partially inflamed: but I have scarcely seen any extensive degree of inflammation in any case, and in some I could hardly say that there was any. The uterus and ovaria I have seen sometimes partake of the inflammation, but not more frequently, or in a greater degree than other parts. The inside of the uterus, or of the intestines, has not been found to be inflamed in any of those whom I have had an opportunity of examining after death: much less have I found any signs of gangrene, or mortification.

Sometimes one or both sides of the thorax will be found containing a quantity of fluid of the same kind with that which has been described, and a solid part floating in it, and attaching itself to the surfaces of the pleura. In the pericardium too I have found a large quantity

138 ON THE LOW FEVER OF CHILD-BED, &c,
quantity of water with some floating pieces
(of coagulating lymph apparently) in it, but
I never met with any of the yellow fluid
(already described) in that cavity.

Being desirous of ascertaining the nature of
the fluid and the solid matter found on the
cavity of the abdomen, and not being suffi-
ciently acquainted with chemistry to depend
upon my own experiments, I wished them to
be made by some person well acquainted with
chemical subjects, and therefore entreated the
favour of Dr. Pearson to examine them. This
he has obligingly done, and has allowed me
to insert his experiments in his own words*.

DEAR SIR,

Leicester Square, Dec. 1792.

“ I CAN only send you the follow-
“ ing imperfect account of the properties of
“ the animal fluid, which you left with me
“ a few days ago.

(1.) “ When first delivered to me it was
“ a cream-like fluid of a yellowish cast, and

* The woman died the night before she was opened, and
the fluid and solid matter by shaking had become somewhat
mixed with each other by carrying.

“ had

“ had a very strong fleshy smell like that of
“ meat which has been kept several days,
“ but was not at all fetid,

(2.) “ After standing a few hours a depo-
“ sition took place of a very copious opaque,
“ and somewhat curdy fluid from a brown
“ and almost clear fluid.

(3.) “ The brown fluid and sediment (2.)
“ being thrown upon a filter of three folds
“ of paper, about $\frac{7}{8}$ of the whole fluid passed
“ through slowly, leaving upon the filter a
“ very thick yellowish and somewhat curdy
“ matter.

Properties of the filtered Fluid (3.)

(a) “ It had the fleshy smell above-men-
“ tioned—was viscid—was slightly turbid—
“ had a very salt taste.

(b) “ It coagulated in nearly the same
“ degree of heat, and in the same manner,
“ but less firmly than the serum of blood.

(c) “ It betrayed no alkali to the test of
“ turnsole and juice of violets; on the con-
“ trary, the former indicated the presence of
“ acid, being evidently reddened.

(d) “ Lime water occasioned no clouds,
“ nor turbidness,

(e) “ Acid

(e) “ Acid of sugar instantly produced
 “ muddiness, and on standing a deposition of
 “ whitish matter, that adhered closely to the
 “ bottom of the glass.

(f) “ Fixed alkalies occasioned no change.

(g) “ Muriated barytes occasioned imme-
 “ diately turbidness.

(h) “ Being triturated with lime the smell
 “ of volatile alkali was just perceptible, and
 “ slight white clouds were seen on holding
 “ over this mixture a bit of glass wetted with
 “ muriatic acid.

(i) “ Nitrated silver instantly rendered this
 “ fluid white and opaque, and in a few mi-
 “ nutes there was a copious white sediment.

(k) “ With the addition of phosphorated
 “ soda there was no alteration,

(l) “ Nor with prussic alkali.

“ The above filtered fluid (3.) therefore
 “ appears to contain coagulable matter like
 “ that of the serum of blood; acid in a free
 “ state, which is not the phosphoric, or car-
 “ bonic acid; calcareous earth combined pro-
 “ bably with phosphoric, or vitriolic acid;
 “ marine acid united either to fixed, or vola-
 “ tile alkali, or to both, and volatile alkali in
 “ a combined state, but no metallic matter.

“ It]

“ It therefore resembles much the serum
 “ of blood, in which however I do not find,
 “ in the experiments which I have made, any
 “ vitriolic acid, or calcareous earth, or acid
 “ in a disengaged state.

“ This filtered fluid (3) is essentially
 “ different from watery liquid found in the
 “ ventricles of the brain, in hydatids, and
 “ in the cellular membrane in anasarcaous
 “ dropfy, inasmuch as in all these cases,
 “ the fluid is transparent and colourless as
 “ spring water, contains phosphoric acid pre-
 “ cipitable by lime water, which has been
 “ mistaken for carbonic acid *, and does not
 “ contain any coagulable matter, nor per-
 “ haps vitriolic acid, but all these fluids are
 “ impregnated with marine salt.

“ The watery fluid in cases of dropfies of
 “ the cavities of the thorax, and of the abdo-
 “ men, agrees with the above liquid (3.) in
 “ containing coagulable matter, though in
 “ much less proportion, in being viscid, in
 “ containing marine salt: but the liquids
 “ differ inasmuch as the dropfical fluid often
 “ is impregnated with phosphoric acid preci-

* See Medical Transactions, Vol. III. my Paper on a
 Case of Anasarcaous Dropfy.

“ pitable by lime water, and I do not find
 “ that it contains calcareous earth, or vitrio-
 “ lic acid, or acid in a disengaged state ; on
 “ the contrary, sometimes alkali.

“ Urine differs essentially from the above
 “ fluid (3.) because it contains a great pro-
 “ portion of phosphoric acid precipitable by
 “ lime water, and no coagulable matter.

“ Dropfical fluid in all cases, serum of
 “ blood, and muscular parts, have a fleshy
 “ smell, but not nearly so strong as that of
 “ the fluid under examination.”

*Properties of the thick Matter (3) which could
 not pass through the Filter.*

“ I mixed this substance with six times its
 “ bulk of rectified spirit of wine, by which it
 “ was apparently more coagulated than be-
 “ fore, and by this means I separated com-
 “ pletely the ferous fluid, which now passed
 “ readily through the paper along with the
 “ spirit of wine, leaving behind a whitish
 “ curdy matter. This being dried it weighed
 “ about $\frac{1}{64}$ part of the whole fluid, (1.) in
 “ which it was originally contained.

(a) “ This dried matter was of a yellowish
“ colour; close in its texture, brittle; had
“ no taste and scarcely any odour; was readily detached in flakes from the paper on
“ which it was dried.

(b) “ Under the blow-pipe with a gentle
“ heat, it first turned black, emitted a strong
“ empyreumatic smell, like burning cheese,
“ or resembling still more a burning oyster;
“ and melted: with a stronger heat it burned
“ with a flame, and emitted white fumes on
“ withdrawing the heat suddenly; and by
“ continuing the flame, it left only a carbonaceous substance, which by a farther application of heat went off totally in vapour.

CONCLUSION.

“ The above cream-like animal fluid appears to be a mechanical mixture of, in appearance, a slightly coagulated matter and a fluid like serum in many properties, in the proportion of one part of the former to sixty-three of the latter. But as to the difference in qualities between this seemingly coagulated matter, and the coagulable lymph of the blood and lymphatics,
“ caseous

“ caseous matter, pus, mucus, and other
 “ animal mucilages, we cannot distinguish
 “ them without farther experiments.

“ I am, dear Sir,

“ Yours, &c.

“ GEORGE PEARSON.”

As the brain and nerves have seemed to be affected in some cases soon after the attack, I did not fail to open the head also, but its contents have always been in a natural state.

I have now endeavoured to describe the symptoms which commonly characterize this complaint, and the appearances on dissection, and shall next attempt to lay before my readers, as probable a statement as is in my power, of the predisposing and occasional causes; and here I wish that I could throw farther light upon the subject than I fear that I shall be able to do, because then if we could not cure, we might at least have some chance of preventing the disease.

With respect to the predisponent causes of the epidemic disease of lying-in women, as dependent upon constitution, I must observe
 that

that it has invaded patients of every variety in that respect. The strong and the weak, those of the plethoric and of the opposite state of body, have been the subjects of its attack, and have fallen a sacrifice to its violence. Married women too have often been attacked with it as well as unfortunate single women, but the latter in by much the larger proportion, at least in the cases which I have seen, even where they were apparently under similar circumstances. It is observable too that the complaint is much more prevalent among the lower than the higher orders of women, yet not so that the former have been exempt from it.

The inferior and laborious orders of people in London, and all large manufacturing towns, are too much crowded in a small space. The streets and lanes in which they live are usually very narrow, and the air is of necessity very much confined, besides being rendered impure by filth, or at least a very general inattention to cleanliness. To this it must be added, that these quarters of this city at least, are scarcely ever free from low, or what have been called putrid fevers. This renders it a much less frequent disease in private practice than in public hospitals, in

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which last it has rarely appeared without committing very considerable ravages.

In the first place then I am inclined to rank all that train of external circumstances, which gives rise to epidemics of a low tendency, among the predisposing causes. What these are we scarcely know except by their effects. Whether it consists in a considerable succession of warm, or damp seasons, or both, or neither, we are scarcely at present in possession of facts sufficient to determine. Upon the whole we are apt to believe that these, added to particular local disadvantages, such as a marshy soil, a confined air, and many other circumstances, which tend to exhaust, or weaken the body, and to render it irritable, give occasion to the production of diseases of the low description, such as that kind of fever called Typhus; the ulcerous sore throat with scarlatina, &c. Such a state of atmosphere, or the tendency to such diseases has, if we may be allowed to judge from what has been already taken notice of in the early part of this Section, a very great aptitude to disposing the bodies of lying-in women readily to fall into a fever of the low kind, if any cause of fever should be applied.

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All the depressing passions of the mind, such as grief, fear, disappointment, and anxiety, have a wonderful effect in weakening and rendering irritable the body, and so particularly inclining it to be acted upon by the prevailing epidemic ; or, in other words, to fall into diseases of great action with diminished strength.

The combination of these two causes becomes emphatically a reason why women in hospitals are peculiarly predisposed to this disease, whether they be married or single.

The General Lying-in Hospital in Store-Street, Tottenham Court Road, much to the credit of the institution, admits not only married, but single women also, if it be their first pregnancy. And however the supercilious and fastidious, or mistaken morality of some may object to such an extension of charity, it ought to be remembered that human distress in any form has a demand upon our pity and a claim upon our relief. The charities for delivering only married women are entitled to praise, but those which extend their beneficence farther, may evidently lay claim to more, and the perfection of character of that man should be very complete indeed, who would

exclude from relief those of his species who are in distress, even though it may have arisen from their own imprudence or folly.

The previously distressed state of mind of females, whether married or single, who are admitted into hospitals, is frequently extreme, and probably disposes them to this disease, which, as observed above, may perhaps be assigned as a reason for the greater frequency of it in hospitals. The patients, if married, are either such as have been deserted by their husbands, or they are widows; and if single, they are such unfortunate young women as have been not only seduced, but also not unfrequently abandoned by those who have debauched, and should have protected them. Under such complicated misfortunes their minds in the latter part of their pregnancy are wholly employed upon the calamity of their situations. Hence the body becomes enervated, and the powers of the system exhausted, so that they both become more liable to the attacks of disease, and less able to withstand it.

It has been remarked in the way of objection to lying-in hospitals, that the disease has not been so frequent among the poorer classes

of women, who are delivered at their own habitations; but it is to be remembered that their situation is hardly ever so distressed as that of those who are the general objects of charity in hospitals: women without a home, without friends, without husbands, without protection, and without the common necessities of life before they were admitted; and when they leave the hospitals, often without a prospect of subsistence for themselves and their children in future. Nothing is before them but a miserable looking forward to the consequences of a stained character, poverty, and want.

From this difference of situation a great disparity will most probably exist, both in the state of the bodies and minds of women delivered in hospitals from that of women delivered at their own houses, sufficient to account for the fact, why the last should not become the subjects of disease, except in a few rare cases, and why, if an occasional cause be applied, the first can hardly escape it.

In confirmation of this, I may observe that one woman, whom I knew to die in private practice, was a person whose mother had for-

merly died in child-bed when she was born. During the whole of her pregnancy, her mind was constantly prepossessed that she too should die in her lying-in. From the time that she was delivered her pulse was never slower than 120. This was most probably owing to the irritability produced by her previously distressed state of mind. The stimulus of her labor brought on a degree of fever, which degenerated in consequence of the nature of the then prevailing epidemic constitution, into a low type, with the affection of the belly, and destroyed her in a few days.

Another predisponent cause of the disease, is most probably too great indulgence in improper kinds of food, and too little attention to regularity in the mode of living towards the conclusion of pregnancy.

Moderate exercise is certainly not to be discouraged at this time, but violent exertions, a life of constant hurry and fatigue, an unvaried pursuit of pleasure, broken rest, irregular hours, and other intemperances, as they at least introduce a state of irritability into the habit, cannot but be injurious to the natural order of labour, and should therefore be studiously avoided. Women therefore in the
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latter part of their pregnancy ought to pay particular attention to their manner of living, so as at least not to be in a state of disease when they fall into labour. This has been so strongly insisted upon in a former part of these Essays, that it would be superfluous to repeat it here.

I was desired to see another patient who had been delivered two days before, and from that time had never been well: her pulse was, when I saw her, very frequent, and this frequency of the pulse was followed by the other symptoms above enumerated. This woman had been much distressed in mind, and had been employed in violent exercise for two days preceding parturition, and in a state of great fatigue fell into labour. It is most likely that on these accounts she became more liable to the disease.

In addition to the presence of these last predisposing causes, that of the epidemic disposition of the season must likewise always be taken into the account; otherwise, under these circumstances, the same disease would always arise if the same occasional causes were applied, which is not the case.

Now the nature of the epidemic constitu-

tion, which had prevailed at the time when this disease was prevalent at Paris in 1746, and in London in 1787-8; was a disposition to diseases of debility, as has been remarked above; with such a predisposition, if any diseased state, especially fever, should appear in a parturient woman, it would almost certainly put on that character which the preceding history of this disease fully justifies.

The immediate cause in many cases would appear to be the act of parturition; at least it is often very difficult to trace any other.

It is very well known that during the strong exertions of labour every woman suffers a kind of temporary fever, or, in other words, the action of the heart and arteries is very considerably accelerated. Now if this should happen to a woman under the influence of the causes adverted to above; and if, under these circumstances, any occasional cause of fever should occur, such as exposure to cold, or infection, the disease thence arising will be most susceptible of that type, to which the system has the greatest aptitude, which here will be that of the low, or irritable kind. Or perhaps an action having once originated simply from the violence of labour, is continued

nued from the acquired irritability already described.

In those examples, where the attack does not immediately follow delivery, it is generally about the third or fourth day. If there had been in the generality of patients much previous distention of the breasts, or disturbance in the system from the milk flowing into them, we might have considered these as the occasional causes; but I have observed above, that frequently little or no milk is secreted, or if it had been before secreted, the breasts soon become flaccid and empty.

In two cases I have reason to believe, that the disease was caused by the patient having secretly, and very imprudently, taken a considerable quantity of wine and spirits, by which a fever was induced.

But after all I have seen several in which I could not trace any occasional cause, except the act of parturition was to be esteemed such. When the attack has been at a great distance of time from delivery, the effects of which one would expect to be immediate, if that were the occasional cause of the complaint, we must attribute it to some other cause of fever.

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It has been suggested to me, that perhaps sometimes the disease has really commenced before the act of labour; but this I cannot absolutely determine from my own experience, although it is not improbable*.

Another circumstance ought not to be omitted, which is the question how far this complaint may be propagated by infection.

That it is sometimes brought on by the mere stimulus of labour in a constitution ready to receive such an impression, is very evident, because it has arisen as an original disease in patients who had not been in the way of communication with any persons labouring under it.

Nevertheless, it appears to me that there is good reason for believing that when the disease is once generated, it is capable of being propagated by infection, like malignant fever; and thence, when it has once begun in a lying-in hospital, it is very apt to make considerable progress, and to prove fatal to a great number of women.

* Dr. Joseph Clarke has, in his paper above quoted, mentioned a case which renders it rather probable.

Another

Another question also arises, which is, whether the affection of the abdomen should be considered as the primary disease, and the fever symptomatic, or the fever the disease and the affection of the abdomen symptomatic. I own that I am inclined to favour the last supposition.

To explain my meaning a little more particularly. I consider that the peritonæal surfaces are after delivery in a different state from that in which they are found at another time. If no disease occurs, no inconvenience results from it, and after some days, or weeks, it returns to its former state. But if in the mean time a fever should arise, either from the irritation of labor, the coming of the milk, infection, or any other cause; and if the tendency of such fever should be to a low type, tumefaction and the other affections of the belly will almost certainly come on. At the very time when I am writing this, I have seen a case, where a patient immediately before delivery had been seized with scarlatina, combined with soreness of the throat. The disease had not disappeared when she was delivered, after which time her pulse became amazingly frequent, and the abdomen became

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affected

affected on the second day with the usual symptoms.

Upon the whole, as far as my experience goes, the same degree of fever would not destroy in the same length of time a patient not in the puerperal state. Indeed we scarcely know any fever except the plague, which has killed so rapidly. And yet I have never seen any evident marks of putrefaction in the disease, such as mortification of parts, &c. As to the offensiveness of the matters thrown up by vomiting or discharged by purging, these make no part of the living animal, and at most only shew, that in this disorder the contents of the primæ viæ not being completely digested, quickly putrefy. With regard to the blood itself, at all stages of the disease when I have ever seen it drawn, it presents a buff upon the surface after coagulation.

Another object for investigation is to determine what is the nature of the affection of the abdomen.

It has been usual to call it inflammation, and the solid substance adhering to the parts, inflammatory crust. But the examination of great numbers of bodies after death does not:

justify

justify either the one or the other. At least we have often found little or no inflammation, at the same time that there have been many pints of the fluid in the cavity. Neither are the parts lying under the crust necessarily inflamed. On the contrary, they frequently are not; or if any inflammation has existed, it has only been in a small portion of the membrane covering some particular part, perhaps not two inches square.

Does the fever then, in a puerperal woman, dispose the peritonæum to effuse the fluid, which being of a coagulating nature, forms a coat on different surfaces?

Does an inflammation of a small part dispose the whole of the peritonæum to throw out the coagulating fluid?

Does the inflammation precede or follow the effusion? If the latter, is the inflammation excited by any stimulating quality of the matter itself*? Or lastly, are the fever, the inflammation, and the effusion of fluid, en-

* I have known two instances in which gentlemen opening the bodies of women who had died in this disease, accidentally wounded their hand. The consequence of which was, swelling of the whole limb and of the axillary glands, and low fever, with a very frequent pulse.

tirely independent of each other, as to cause and effect, and are they only parts of one whole, which is a disease *sui generis*? There seems to be good reason for believing that the action in the vessels of the peritonæum is of a peculiar nature, since the matter found there (as appears from Dr. Pearson's experiments) is different from any other animal fluid.

It has been already observed, that some authors who have written on Puerperal Fever, have confounded all cases under the same general name, where there has been any affection of the abdomen; and have in consequence of this false idea recommended in all the same method of treatment. When I was first engaged in the practice of midwifery, I am free to acknowledge that I fell into the same error, and it was not till my mind had been corrected by experience and more observation, that I began to see the necessity of attending more particularly to the symptoms of discrimination, upon finding that the treatment, which is proper in inflammation of the uterus or peritonæum, or both, connected with an inflammatory state of the system, is exceedingly detrimental in the epidemic disease, or
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where there is an affection of the abdomen along with a low fever.

I trust that I have already shewn the fallacy of this doctrine, and I am sure that the distinctions which I have made will be found to be true in practice, because they are not founded on hypothesis, or fancy, but have been drawn from nature.

This disease is less obedient to the powers of medicine than almost any which I know. Its attack is so very insidious, and often entirely unperceived, and its fatal termination is frequently so sudden, that the time when medicine could be useful, has often elapsed before it has been even known that the disease existed at all.

If any thing can be effected with a reasonable expectation of success, it must be very early in the disease. If we delay, so much mischief will have been done, either locally or generally, as almost to put it beyond the power of any medicine to be of service.

In the first place then, let me caution (especially younger) practitioners not to be misled by the tumefaction of the abdomen so as to employ the lancet with the expectation of curing a supposed inflammation.

Bleeding

Bleeding from the system has been always attended with manifest disadvantage, although it has been tried in patients who have been apparently strong and plethoric before. It has in some instances, for a short time, diminished the pain; and the buffy appearance on the blood taken away, has been supposed to justify the operation; but it generally lowers the patient extremely, and in some cases I have known it evidently hasten death.

Bleeding from the skin of the belly by leeches, though it do not produce the same degree of debility, yet has in no instance, within my knowledge, contributed in any degree to the cure of the patient.

The objections which in a former Section I took against blistering the abdomen, I beg leave to repeat here more strongly. In inflammation of the uterus and peritonæum, I stated that blisters might possibly be useful, though I had never seen such decided advantages from them myself as we often find in cases of pleurisy, peripneumony, &c; but that my experience was not sufficient to be conclusive: but in this disease blisters certainly increase the irritability in a wonderful degree, and render the pulse more frequent than it was before.

before. Now and then they seem for a short time to relieve the sensation of pain, but this relief is only temporary, and is not enough to warrant their use, as their ill effects are generally sufficient to counterbalance this one advantage. In one case, a repetition of blisters to different parts was proposed, and the patient recovered; but a similar conduct pursued in others failed of the desired effect, and destroyed those hopes which the event of a solitary case had raised.

A repetition of vomits on the plan suggested by Monsieur Doulcet has been attended with obvious disadvantages. The agitation of vomiting by the necessary pressure made on the contents of the cavity during their operation has always aggravated the pain, and tended farther to exhaust the powers of the woman, already sufficiently reduced.

The exhibition of relaxants, such as antimony in different forms, though employed in the beginning of some cases, where the apparent strength of the patient favoured their use, has also failed of success. They have usually the effect of producing, or increasing the disposition to vomiting and purging, which,

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when once brought on, are with great difficulty restrained.

All the medicines which have been employed with a view to the diminution of inflammation have, in the course of my experience, failed in curing the disease. It became therefore next an object to try whether such as have a tendency to support the strength and diminish the irritability, would be attended with better effects.

I am very loth upon any practical subject to offer any thing which is likely to mislead, especially where my own experience may not have been sufficiently extensive to warrant a very decisive opinion; yet I must say that, as far as my judgment goes, this plan will on the whole be most successful.

As soon then as any very considerably increased frequency of the pulse is discovered, I believe that it is right to begin immediately with exhibiting Peruvian bark very freely, and in as large quantities as the stomach will bear. In substance with opium in the proportion of a drachm in two or three hours, I have given it with advantage. If, however, there should be any tendency to sickness,

ness, we must be contented with employing the decoction along with some tincture of bark and opium every two or three hours. If a disposition to diarrhœa should come on, some aromatic confection may be added.

Opium is so efficacious in relieving the pain, that it is hardly to be dispensed with, and it may be given in large doses, or frequently repeated; as for example, a grain may be given every six, or every four hours, if no inconvenient consequences should arise from its use; but the precise dose will depend so much on age, strength, and constitution, that no general rule can be offered. A sufficient quantity should be given to appease the pain, and procure sleep.

A moderate quantity of wine diluted with water, or mixed with such food as sago, panada, tapioca, rice-gruel, &c. may be taken, provided that it do not disorder the head; in the course of the disease it will often be necessary to support the strength by wine. Broth, or milk with bread, may be employed also for food, and barley water with some wine for drink.

Very frequently about the third or fourth

day of the disease, a diarrhœa coming on, prevents a continuance of the use of the Peruvian bark.

Under these circumstances, if the pain of the cavity of the belly should be not very considerable, a gentle emetic of ipecacoan may be given; but if it should, then the exertions of vomiting will more than outweigh any advantages to be expected from it. Here we must be satisfied with giving a dose of rhubarb, and afterwards an opiate. If there should be vomiting with the purging, we must give an emetic first, and then some rhubarb and opium. The effervescent saline draught has much efficacy in allaying vomiting, but in this case the quantity of vapour extricated during the combination of the acid with the alkali, adds to the distension, and increases the pain of the abdomen.

Should the diarrhœa have been violent, we can seldom with advantage return to the Peruvian bark in any other form than that of decoction, and sometimes even that will disagree. As a substitute for it, and still pursuing the original intention, a bolus composed of half a drachm of powdered Columbo
root,

root, with a grain of opium, may be given once in three or four hours. The decoctum cornu cervi may be used for common drink, and occasionally the mistura cretacea, with some aromatic tincture, may be taken. If with diarrhœa there should be much tenesmus, glysters with opium will be necessary, but not otherwise.

Where there is much purging, emollient glysters may be thrown up with advantage once or twice in twenty-four hours; they will wash away any impurities within their reach, and sometimes bring away with them any air in the lower part of the bowels, which is often very distressing to the patient.

Besides this general outline of the treatment proper to be pursued, cataplasms applied to the legs and feet are useful on the principle formerly stated, and are, I think, to be preferred to blisters; cataplasms are only intended to be recommended as rubefacients, not as vesicatories.

Anodyne fomentations to the belly, when there is much pain, will be found at least to relieve for a time, though I have often doubted whether their relaxant effects afterwards

wards are not an objection to their use. Dry fomentations are not attended with the same inconvenience, but they seldom relieve the pain so much.

The advantage of such a treatment will, it is acknowledged, be only negatively proved; yet if it should be found, that in cases, where the pulse has been very frequent, its frequency is thereby diminished, and the strength improved, we shall have sufficient encouragement for pursuing it; and if in some instances it should be even unnecessarily tried, it does not appear that any disagreeable consequences can arise from it; on the other hand, should it succeed in preventing the farther progress of so fatal a disorder in some cases, it will amply compensate us for having administered it, where it was not absolutely required, in others.

After all which is contained in this Section respecting the treatment of this disease of lying-in women, and after all which can be done, it will be found to be very fatal in a great many instances. I have offered the result of my experience, and I hope that those of my profession who have
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not met with the complaint, will not hastily condemn these Essays because I cannot point out a certain method of cure. Those who have, will, I trust, acknowledge my description to be accurate, whilst they lament with me, that there are cases which baffle the art, and seem to be almost beyond the reach of medicine.

If we hope to be able to prevent this disease, a very obvious thing to be attended to, is to keep the minds of all patients both before, during the time of labour, and afterwards, as free from every kind of anxiety and uneasiness as it is possible; since, as I have already observed, they seem to have a material influence in subjecting them to the attacks of the disease. They should also carefully avoid all exposure to the infection of fever before delivery, and to the occasional causes of fever afterwards, because, as I have already remarked, if a fever should be excited, it will be very likely to become of the nature of the epidemic or endemic constitution.

If the disease should occur in an hospital, the patient should be immediately removed from all others, and the bed, bed-clothes,
&c.

&c. should be all washed and aired before they be again employed, and the wards should be scoured, painted, and white-washed. This was the practice in the General Lying-in Hospital in Store-Street, both before and since I had any appointment in the house. I mention this circumstance, because Dr. Joseph Clarke expresses his surprise that it has not been done in England. It may have, and probably has been done in other Hospitals, because it is agreeable to the dictates of common sense, that nothing is so likely to prevent the progress of infection as giving new surfaces, or cleaning old ones.

Since the year 1788, this complaint has hardly made its appearance at all ; or at most only in a few cases. But I think, from what has already happened, I may venture to foretell, that if at any time there shall be a succession of warm and damp seasons, and of mild winters ; and if the effects of this on the system shall be proved by the appearance of low fevers, or the ulcerous sore throat, under such circumstances it will be found that women in the puerperal state will recover slowly, or will be apt from very slight causes
to

to fall into the state of disease described in this Essay, especially in lying-in hospitals, and among single women, the distressed state of whose minds before their admission may have given greater force to the epidemic disposition.

Before I conclude I ought to observe, that violence occasioned during labour may produce (though rarely in such constitutions) inflammation of the uterus or peritonæum, which, existing along with a low fever, may sometimes make rather a mixed case. Here the greatest sagacity and judgment are required to determine what mode of treatment will best accord with these circumstances. The situation of the patient is so dangerous and so critical, that it is impossible to be too much upon our guard. An unwary practitioner, under the idea of carrying off inflammation, might be seduced into employing evacuations: but he will discover too late, when this has been done, that his patient will sink sooner under the depression thereby occasioned. A prudent man will never fail to remember that all remedies which reduce the strength much, must be very cautiously admitted. This is a point which I

wish particularly to impress, because I know nothing in the practice of medicine which requires more nicety of discrimination, since the very life of the woman hangs upon the decision.

THE END.

ERRATUM.

Page 10, line 22, for *external*, read *internal*.